Trace Metal Content Data for Crustaceans and Fishes from Howe Sound, British Columbia

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Le titre exact paraît au haut du résumé de chaque rapport.

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TRACE METAL CONTENT DATA FOR CRUSTACEANS AND FISHES FROM HOWE SOUND, BRITISH COLUMBIA

by

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TABLE OF CONTENTS

ABSTRACT/RESUME v

INTRODUCTION 1

MATERIALS AND METHODS 2

1. Field Collection and Sample Preparation 2
1.1 Sampling Zones and Sites 2
1.2 Sampling Techniques 2
1.3 Sample Preparation 2
1.3.1 Crustaceans 3
1.3.2 Fishes 3
2. Laboratory Analyses 3

ACKNOWLEDGEMENTS 4

REFERENCES 5

FIGURE 1. Sampling sites and zones in Howe Sound, British Columbia 6

LIST OF TABLES

TABLE 1. List of organisms analyzed for trace metals 7

TABLE 2. Summary of wet:dry ratios for metal concentrations in crustaceans and fishes from Howe Sound, British Columbia 8

TABLE 3. Summary of trace metal (mercury, copper, zinc, cadmium, chronium, arsenic) data for crustaceans and fishes from Howe Sound, May 1977 to April 1978 9

TABLE 4. Summary of trace metal (iron, lead, calcium, magnesium, sodium, nickel) data for crustaceans and fishes from Howe Sound, May 1977 to April 1978 11

TABLE 5. Summary of trace metal (manganese, aluminum, barium, cobalt, molybdenum, antimony) data for crustaceans and fishes from Howe Sound, May 1977 to April 1978. . . 13

TABLE 6. Summary of trace metal (strontium, titanium, vanadium, slenium, silicon) data for crustaceans and fishes from Howe Sound, May 1977 to April 1978 15

TABLE 7. Trace metal data for crustaceans and fishes from Howe Sound, May 1977 to April 1978 17

TABLE 8. Summary of trace metal (mercury, copper, zinc, cadmium, lead, nickle) content data for crustaceans from Howe Sound, March 1971 to November 1971..... 39

TABLE 9. Trace metal content data for crustaceans and fishes from Howe Sound, British Columbia, March 1971 to November 1971..... 41

APPENDICES

APPENDIX 1. List of Heavy metals analyzed and their detection limits (lowest quantity detectable) in tissue..... 44

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ABSTRACT

R.M. Harbo and I.K. Birtwell. 1983. Trace metal content data for crustaceans and fishes from Howe Sound, British Columbia. Canadian Data Report of Fisheries and Aquatic Sciences No. 379 44 p.

Trace metal concentrations were determined in crustaceans and fishes from Howe Sound, British Columbia, during the periods March to November, 1971 and May 1977 to April 1978.

The surveys were undertaken to determine concentrations of metals in tissues of marine organisms in an inlet where there are many industrial waste discharges. Howe Sound is the site of two pulp and paper mills, a chlor-alkali chemical plant, mining and gravel operations.

Key Words: Fishes, crustaceans, pollution, trace metals, Howe Sound, British Columbia.

RÉSUMÉ

Le présent rapport porte sur les concentrations de métaux-traces dans les crustacés et les poissons peupland la baie Howe (Colombie-Britannique), de mars à novembre 1971 et de mai 1977 à avril 1978.

Ces levés visaient à déterminer la teneur en métaux des tissus des organismes marins d'un inlet qui reçoit beaucoup d'effluents industriels. Les rives de la baie Howe comptent deux usines de pate et papier, une fabrique de chlore, ainse que des centres d'extraction de mines et de gravier.

Mots-clés: poissons, crustacés, pollution, métaux-traces, baie Howe, Colombie-Britannique.

INTRODUCTION

This report lists concentration metals in marine organisms from Howe Sound, British Columbia. The mercury concentration data have been previously reported (Harbo and Birtwell 1978) but are listed here for comparison with other metal levels.

Howe Sound is the southern most fjord-inlet on the mainland coast of British Columbia. It is the site of many industrial activities including forest harvesting, log handling, pulp and paper mills, chemical plants, mining and gravel operations.

FISHING CLOSURES

Indications of mercury contamination of biota in upper Howe Sound in 1970 precipitated a closure of commercial and sports fisheries. The ban on the taking of salmon, trout and herring, was removed shortly thereafter while the closure was maintained until 1978 for other fish, Currently, all fisheries have been reopened.

Annual surveys to determine the mercury content of Howe Sound marine and estuarine organisms have been carried out by Fisheries and Oceans (Harbo and Birtwell 1978) and by Beak Consultants Ltd. on behalf of the chlor-alkali company from 1970 to 1978 (excluding 1976). The standard for mercury content in marine and freshwater animal products recommended by the Canadian Department of Health and Welfare as safe for human consumption is 0.5 μg^{-1} (ppm) on a wet-weight basis.

CHLOR-ALKALI CHEMICAL PLANT

A chlor-alkali plant situated in the Squamish estuary, started production in 1965. The plant produces chlorine and caustic by the mercury-cell electrolosis of brine. In 1970 up to 9,000 gd^{-1} of mercury were discharged in effluents into the estuary (Harbo and Birtwell, 1978). Thompson *et al.* (1980) have estimated that between 1965 and 1970 as much as 40 tonnes of mercury may have been released into Howe Sound.

In-plant improvements commencing in 1970 immediately reduced daily discharge levels and by 1975 the daily discharge was an average of approximately 40 g mercury. (Harbo and Birtwell 1978). Thompson, *et al.* (1980) estimate that since 1970 less than 0.7 tonnes and perhaps as little as 0.13 tonnes of mercury have been deposited from the effluent. However, some mercury is also released in atmospheric emissions and the mercury unaccounted for is significant.

PULP MILLS

Pulp mills that used mercuric slimicides have been regarded as major sources of mercury pollution (Bligh, 1970). Neither of the Howe Sound pulp mills, at Port Mellon and Woodfibre had records of the use of mercuric slimicides or other mercuric compounds.

MINING OPERATIONS

The following data came from communications from the Department of Environment, Environment Protection Service. Between 1899 and 1974 a copper-zinc mine at Britannia discharged mine tailings into Howe Sound via Britannia Creek. When the mine closed down in 1974 leachate containing metals (copper, zinc, iron, aluminum and cadmium) continued to discharge from inside the mine, but under orders from the British Columbia Ministry of Environment, Waste Management Branch, this leachate was to receive treatment.

Improvements at the site have included the collection, treatment and discharge of waste into a submerged outfall at a depth of 180 feet below the high tide level.

MATERIALS AND METHODS

1. FIELD COLLECTION AND SAMPLE PREPARATION

1.1. *Sampling Zones and Sites*

Sampling was conducted during the periods March to November 1971 and May 1977 to April 1978. Howe Sound was divided into eight sampling zones and identified from the Canadian Hydrographic Service Chart, number 3586. Zones 1 to 5 were in the area closed to fishing as shown in Figure 1. Each sampling site within each zone was identified by a letter.

The sampling zones were consistent with those used in the annual surveys carried out between 1970 and 1975. (Harbo and Birtwell, 1978).

1.2. *Sampling Techniques*

A variety of capture techniques were employed, including crab, and prawn traps, gillnets, long lines, otter trawls, and scuba diving. In general, the organisms to be sampled determined the method of capture.

1.3. *Sample Preparation*

After collection and preparation, all samples were frozen.

1.3.1 *Crustaceans*

Legal size make Dungeness crabs, *Cancer magister*, were taken because of their commercial and recreational importance. Fishery regulations prohibit the taking of *C. magister* with a carapace width less than 16.5 cm; a size that female crabs rarely attain.

Prawns, *Pandalus platyceros*, were sampled using traps, baited with dogfish carcasses. In lower Howe Sound, prawns were obtained from commercial fishermen. Some spiny pink shrimp, *P. borealis*, were also taken in prawn traps.

Side stripe shrimp, *Pandalopsis dispar*, and spiny pink shrimp, *P. borealis*, were taken in deep water otter trawls at depths to 225 m.

The carapace length of shrimps and prawns was measured from the base of the eyestalk to the posterior mid-dorsal edge, with a vernier caliper (after Butler, 1964).

Some difficulty was experienced in determining the sex of shrimps and prawns in the field. All the females which were identified were ovigerous (egg bearing).

1.3.2 *Fishes*

Fishes were identified to the species level, according to Hart (1973).

Dorsal muscle tissue was taken from just behind the head of each fish.

The length of a fish (except spiny dogfish) was measured from the tip of the nose to the fork of the tail. The total length of spiny dogfish, *Squalds acanthias*, was measured from the tip of the nose to the tip of the tail. Sex was determined by the presence or absence of claspers, make and female respectively.

2. LABORATORY ANALYSES

The procedures for sample preparation and metal analysis, other than mercury were those outlined in the environmental laboratory manual of the Department of Environment, Environmental Protection Service, Department of Fisheries and Oceans, Pacific Region. (Government of Canada, 1979).

Metal analyses were carried out by the joint Department of Environment/ Department of Fisheries and Oceans laboratory, 4160 Marine Drive, West Vancouver, B.C. A list of all metals analyzed and their detection limits is given in Appendix 1. The tissue samples were analyzed for their metal content by atomic emmision spectrometry (AES) using a Jarrel-Ash Inductively Coupled Argon Plasma-Optical Emmision Spectrometer with spectrum shifter (ICAP-OES, JA Atomcomp, 975). Both extractable and total metals were determined by AES (ICAP-OES).

MERCURY ANALYSES

A tissue sample was blended, and duplicate samples were analysed. A subsample (0.12 to 0.5 g) was weighed in a graduated tube and the tissue was digested with concentrated sulfuric acid and oxidized with 50% hydrogen peroxide. The resulting clear solution was brought to a standard volume in the graduated tube and a few drops of potassium permanganate solution were added to eliminate excess hydrogen peroxide and to maintain an oxidizing condition.

The sample was analyzed by "cold vapour" Atomic Absorption Spectrophotometry (AAS) at 2537 A^{o}, using a hydrogen continuum lamp for background correction. The mercury was reduced with a solution containing stannous sulfate, hydrazine sulfate and hydroxylamine sulfate and swept through the cell with argon.

Reference samples from a Canada-wide check programme, confirmed the accuracy and precision of mercury analyses.

The mercury content data are expressed with two significant figures.

RESULTS

Table 1 lists the organisms tested for metal content. A summary of ratios of wet weights to dry weights is given to assist in comparison to other data in the literature. Some reports give metal values on a wet weight (fresh) basis or a dry weight basis.

Tables 3, 4, 5, 6 and 8 are summaries for selected edible species, important in recreational or commercial fisheries. Complete data listings are given in Tables 7 and 9.

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The chemical analyses were conducted by D. Yoshioka at the Department of Fisheries and the Environment laboratory, West Vancouver, British Columbia, under the direction of Dr. R.B. Swingle and J. Davidson.

REFERENCES

Bligh, E.G. 1970. Mercury and the contamination of freshwater fish. Fish. Res. Board Can. MS Rep. 1088:27p.

Butler, T.H. 1964. Growth, reproduction and distribution of Panalid shrimps in British Columbia. J. Fish. Res. Board Can. 21 (6): 1403-1452.

Government of Canada. 1979. Environmental Laboratory Manual of the Department of Environment, Environmental Protection Service, and Department of Fisheries and Oceans, Pacific Region.

Harbo, R.M. and I.K. Birtwell. 1978. Mercury content data for crustaceans and fishes from Howe Sound, British Columbia, May 1977 to April 1978. Fish. Mar. Serv. Data Rep. No. 63: 29p.

Hart, J.L. 1973. Pacific Fishes of Canada. Fish. Res. Board Can. Bulletin 180: 740p.

Thompson, J.A.J., R.W. Macdonald, and C.S. Wong. 1980. Mercury geochemistry in sediments of a contaminated fjord of coastal British Columbia. Geo. Chem. Journal (Japan) 14: 71 to 81.

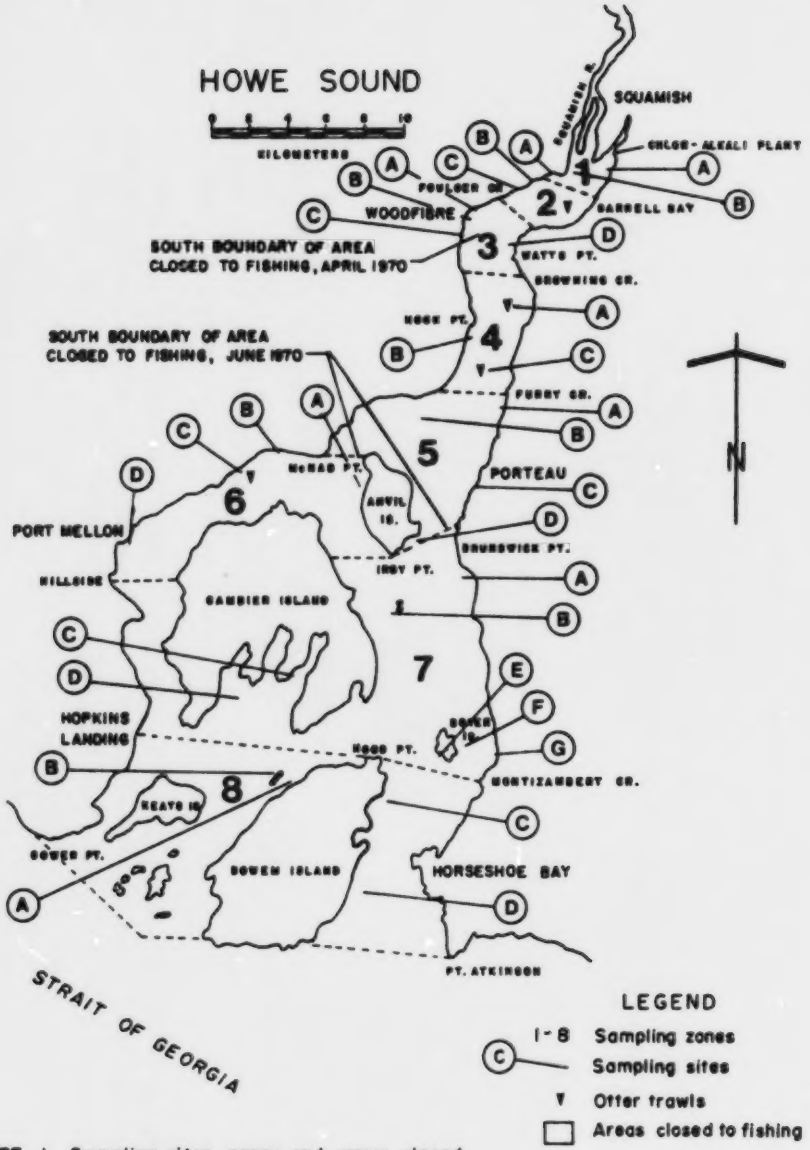

FIGURE 1. Sampling sites, zones and areas closed to fishing in Howe Sound, British Columbia.

Table 1. List of organisms from Howe Sound, B.C. analyzed for trace metal content. (Major headings according to Butler, 1964 and Hart, 1973).

ARTHROPODA

Class Crustacea

prawn, *Pandalus platyceros*
spiny pink shrimp, *P. borealis*
side stripe shrimp, *Pandalopsis dispar*
Dungeness crab, *Cancer magister*

CHORDATA

Subphylum Vertebrata

Class Chondrichthys

Spiny dogfish, *Squalus acanthias*
ratfish, *Hydrolagus colliei*

Class Osteichthys

Pacific herring, *Clupea harengus pallasi*
Surf smelt, *Hypomesus pretiosus pretiosus*
Anchovy, *Engraulis mordax mordax*
Chum salmon, *Oncorhynchus keta*
Chinook salmon, *O. tshawytscha*
striped seaperch, *Embiotoca lateralis*
rockfish, *Sebastes* sp.
yellowtail rockfish, *Sebastes ruberrimus*
copper rockfish, *S. caurinus*
Black rockfish, *S. melanops*
Quillback rockfish, *S. maliger*
Splitnose rockfish, *S. diploproa*
Lingcod, *Ophiodon elongatus*
Kelp greenling, *Hexagrammos decagrammus*
Flounder, unidentified
Starry flounder, *Platichthys stellatus*
Rex sole, *Glyptocephalus zachirus*
Rock sole, *Lepidopsetta bilineata*
Slender sole, *Lyopsetta exilis*
English sole, *Parophrys vetulus*
Flathead sole, *Hippoglassoides elassodon*
Dover sole, *Microstomus pacificus*
Walleye pollock, *Theragra chalcogramma*

Table 2. Summary of wet to dry ratios for crustaceans and fishes from Howe Sound, British Columbia, May 1977 to April, 1978.

Common Name (Species)	n	WET to DRY RATIOS $\bar{x}$ + S.D.	(Range)
CRUSTACEANS			
Dungeness crab *(Cancer magister)*	71	5.00 ± 0.60	(4.03 - 6.81)
prawns *(Pandalus platyceros)*	94	4.33 ± 0.46	(2.90 - 5.30)
side-stripe shrimp *(Pandalopsis dispar)*	10	4.34 ± 0.26	(3.89 - 4.78)
Spiny pink shrimp *(Pandalus borealis)*	33	4.35 ± 0.22	(3.75 - 4.68)
FISHES			
Spiny dogfish *(Squalus acanthias)*	70	4.03 ± 0.49	(2.65 - 5.21)
Pacific herring *(Clupea harengus pallasi)*	3	3.88 ± 0.56	(3.27 - 4.38)
chum salmon *(Ocorhynchus keta)*	1	3.20	
chinook salmon *(O. tshawytscha)*	2	3.90 ± 1.33	(2.96 - 4.84)
rockfish *(Sebastes spp.)*	40	4.62 ± 0.29	(3.42 - 5.09)
lingcod *(Ophiodon elongatus)*	13	4.54 ± 0.58	(2.66 - 4.99)
rex sole *(Glyptocephalus zachirus)*	4	5.38 ± 0.53	(4.93 - 6.14)
rock sole *(Lepidopsetta bilineata)*	4	4.55 ± 0.29	(4.30 - 4.81)
Dover sole *(Microstomus pacificus)*	5	5.46 ± 0.32	(5.06 - 5.80)
slender sole *(Lyopsetta exilis)*	10	5.38 ± 0.41	(4.79 - 6.10)
English sole *(Parophyrys vetulus)*	22	5.01 ± 0.73	(2.76 - 5.93)

TABLE 3. Summary of trace metal (Hg,Cu,Zn,Cd,Cr,As) content data

Common Name (Species)	n	MERCURY Wet Wt. x̄ ± S.D. (Range)	n	MERCURY Dry Wt. x̄ ± S.D. (Range)	n	COPPER Dry Wt. x̄ ± S.D. (Range)	n	ZINC Dry Wt. x̄ ± S.D. (Range)	n	CADMIUM Dry Wt. x̄ ± S.D. (Range)	n	CHROMIUM Dry Wt. x̄ ± S.D. (Range)	n	ARSENIC Dry Wt. x̄ ± S.D. (Range)
		TRACE METALS ($\mu g\ g^{-1}$)												
CRUSTACEANS														
Dungeness crab *(Cancer magister)*	71	0.16 ± 0.11 (0.02 - 0.42)	71	0.83 ± 0.59 (0.13 - 2.20)	71	43.08 ± 15.83 (15.40 - 92.00)	71	205.56 ± 35.32 (145.00 - 311.00)	71	0.49 ± 0.02 (0.42 - 0.63)	71	1.13 ± 1.28 (0.83 - 11.70)	71	16.27 ± 6.76 (8.30 - 37.00)
prawn *(Pandalus platyceros)*	94	0.17 ± 0.10 (0.02 - 0.81)	94	0.74 ± 0.43 (0.06 - 3.60)	93	30.53 ± 11.06 (6.30 - 87.50)	93	54.17 ± 9.91 (15.30 - 103.00)	93	0.49 ± 0.03 (0.44 - 0.66)	93	0.99 ± 0.10 (0.87 - 1.70)	93	43.67 ± 22.13 (9.30 - 128.00)
side-stripe shrimp *(Pandalopsis dispar)*	10	0.10 ± 0.06 (0.05 - 0.21)	10	0.45 ± 0.25 (0.21 - 1.00)	10	22.94 ± 5.07 (17.60 - 34.90)	10	45.66 ± 2.39 (42.50 - 49.00)	10	0.65 ± 0.20 (0.47 - 1.00)	10	1.32 ± 0.42 (0.93 - 2.10)	10	32.70 ± 13.45 (21.00 - 65.00)
spiny pink shrimp *(Pandalus borealis)*	33	0.12 ± 0.05 (0.04 - 0.25)	33	0.53 ± 0.21 (0.20 - 1.09)	33	28.46 ± 13.95 (9.70 - 80.80)	33	47.33 ± 6.25 (38.70 - 68.00)	33	1.47 ± 0.62 (0.53 - 3.30)	33	2.93 ± 1.23 (1.10 - 6.60)	33	45.64 ± 14.44 (27.00 - 80.00)
FISHES														
spiny dogfish *(Squalus acanthias)*	80	0.98 ± 0.63 (0.15 - 3.40)	80	3.41 ± 1.77 (0.74 - 9.70)	70	7.65 ± 7.83 (0.93 - 55.90)	70	12.32 ± 4.53 (6.50 - 40.20)	70	0.52 ± 0.33 (0.46 - 3.20)	70	1.04 ± 0.45 (0.91 - 4.60)	70	18.19 ± 12.31 (9.10 - 82.00)
Pacific herring *(Clupea harengus pallasi)*	3	0.02 ± 0.0 (0.02 - 0.02)	3	0.07 ± 0.01 (0.07 - 0.08)	3	3.93 ± 1.85 (1.80 - 5.00)	3	34.20 ± 23.22 (11.50 - 57.90)	3	0.82 ± 0.36 (0.49 - 1.20)	3	1.59 ± 0.67 (0.98 - 2.30)	3	15.93 ± 6.65 (9.80 - 23.00)
chum salmon *(Oncorhynchus keta)*	1	0.03	1	0.10	1	11.90	1	11.30	1	0.48	1	2.30	1	9.50
chinook salmon *(O. tshawytscha)*	2	0.06 ± 0.00 (0.06 - 0.07)	2	0.25 ± 0.09 (0.19 - 0.31)	2	3.05 ± 1.49 (2.00 - 4.10)	2	21.00 ± 2.26 (19.40 - 22.60)	2	0.49 ± 0.02 (0.47 - 0.50)	2	0.97 ± 0.04 (0.94 - 1.00)	2	11.00 ± 1.41 (10.00 - 12.00)

rockfishes *(Sebastes spp.)*	40	0.33 ± 0.24 (0.07 – 1.00)	40	1.56 ± 1.17 (0.34 – 4.85)	40	4.27 ± 4.84 (0.94 – 27.50)	40	16.27 ± 2.46 (12.70 – 23.00)	40	0.48 ± 0.02 (0.46 – 0.59)	40	0.97 ± 0.05 (0.91 – 1.20)	40	10.65 ± 5.75 (9.10 – 46.00)						
lingcod *(Ophiodon elongatus)*	13	0.26 ± 0.21 (0.10 – 0.68)	13	1.17 ± 1.01 (0.41 – 3.17)	13	4.76 ± 2.88 (1.20 – 10.20)	13	28.35 ± 9.34 (14.00 – 45.80)	13	0.48 ± 0.01 (0.46 – 0.50)	13	0.96 ± 0.02 (0.91 – 0.99)	13	9.57 ± 0.23 (9.10 – 9.90)						
rex sole *(Glyptocephalus zachirus)*	4	0.42 ± 0.37 (0.09 – 0.75)	4	2.33 ± 2.13 (0.46 – 4.48)	3	1.66 ± 0.91 (0.99 – 2.70)	3	14.27 ± 0.32 (13.90 – 14.50)	3	0.81 ± 0.43 (0.49 – 1.30)	3	1.66 ± 0.91 (0.99 – 2.70)	3	41.30 ± 40.49 (9.90 – 87.00)						
rock sole *(Lepidopsetta bilineata)*	4	0.04 ± 0.01 (0.03 – 0.05)	4	0.19 ± 0.04 (0.13 – 0.22)	4	4.10 ± 5.54 (1.10 – 12.40)	4	18.85 ± 2.36 (17.00 – 22.30)	4	0.62 ± 0.12 (0.50 – 0.78)	4	1.25 ± 0.27 (0.99 – 1.60)	4	17.50 ± 3.70 (14.00 – 22.00)						
Dover sole *(Microstomus pacificus)*	5	0.06 ± 0.03 (0.04 – 0.11)	5	0.30 ± 0.14 (0.20 – 0.54)	5	1.69 ± 1.41 (0.98 – 4.20)	5	16.86 ± 5.14 (13.20 – 25.90)	5	0.84 ± 0.71 (0.49 – 2.10)	5	1.69 ± 1.41 (0.98 – 4.20)	5	52.20 ± 18.54 (37.00 – 84.00)						
slender sole *(Lyopsetta exilis)*	10	0.49 ± 0.22 (0.19 – 0.88)	10	2.61 ± 1.13 (0.91 – 4.57)	10	4.52 ± 2.35 (1.70 – 9.50)	10	13.25 ± 6.61 (5.30 – 25.60)	10	2.25 ± 1.17 (0.83 – 4.80)	10	4.52 ± 2.35 (1.70 – 9.50)	10	45.30 ± 23.40 (17.00 – 95.00)						
English sole *(Parophrys vetulus)*	22	0.08 ± 0.07 (0.02 – 0.29)	22	0.44 ± 0.40 (0.08 – 1.62)	22	2.66 ± 3.12 (0.93 – 11.70)	22	19.15 ± 2.73 (15.20 – 24.70)	22	0.53 ± 0.10 (0.46 – 0.95)	22	1.09 ± 0.22 (0.93 – 1.90)	22	31.77 ± 20.71 (10.00 – 81.00)						

TABLE 4. Summary of trace element (Fe,Pb,Ca,Mg,Na,Ni) content data for crustaceans and fishes from Howe Sound, British Columbia, May 1977 to April 1978.

Common Name (Species)	TRACE METALS ($\mu g\ g^{-1}$) IRON Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	LEAD Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	CALCIUM Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	MAGNESIUM Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	SODIUM Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	NICKEL Dry Wt. $\bar{x} \pm$ S.D. (Range)
CRUSTACEANS											
Dungeness crab *(Cancer magister)*	71 42.88 ± 29.03 (13.60 - 156.00)	71	4.85 ± 0.14 (4.20 - 5.00)	71	5767.57 ± 4978.11 (888.00 - 27400.00)	71	1642.41 ± 394.24 (1190.00 - 3590.00)	71	12468.45 ± 5639.77 (1660.00 - 37200.00)	71	9.69 ± 0.27 (8.30 - 10.00)
prawn *(Pandalus platyceros)*	93 11.64 ± 4.83 (6.10 - 29.10)	93	4.90 ± 0.28 (4.40 - 6.60)	93	1761.49 ± 779.28 (705.00 - 4720.00)	93	1607.66 ± 191.56 (1000.00 - 2120.00)	93	9134.62 ± 2444.09 (4100.00 - 17100.00)	93	9.79 ± 0.54 (8.70 - 13.00)
side-striped shrimp *(Pandalopsis dispar)*	10 52.24 ± 27.63 (15.90 - 118.00)	10	11.52 ± 15.61 (4.70 - 55.60)	10	3537.40 ± 2925.69 (714.00 - 10400.00)	10	1346.00 ± 189.28 (1190.00 - 1840.00)	10	7538.00 ± 823.29 (6130.00 - 8970.00)	10	13.18 ± 4.17 (9.30 - 21.00)
spiny pink shrimp *(Pandalus borealis)*	33 19.68 ± 15.24 (5.10 - 53.00)	33	14.67 ± 6.20 (5.30 - 33.00)	33	2512.30 ± 1363.67 (607.00 - 6490.00)	33	1493.94 ± 288.81 (1110.00 - 2520.00)	32	9654.06 ± 1846.48 (6290.00 - 16300.00)	33	29.36 ± 12.25 (11.00 - 66.00)
FISHES											
spiny dogfish *(Squalus acanthias)*	70 11.23 ± 9.07 (4.50 - 70.30)	70	5.03 ± 2.01 (4.60 - 21.60)	70	364.51 ± 429.92 (137.00 - 2790.00)	70	781.67 ± 126.52 (417.00 - 1120.00)	70	3768.29 ± 1238.59 (1410.00 - 9820.00)	70	9.20 ± 1.77 (0.94 - 10.00)
Pacific herring *(Clupea harengus pallasi)*	3 31.43 ± 14.24 (15.00 - 40.00)	3	8.17 ± 3.58 (4.90 - 12.00)	3	2670.00 ± 466.80 (2320.00 - 3200.00)	3	1174.67 ± 394.90 (804.00 - 1590.00)	3	2866.67 ± 1571.38 (1220.00 - 4350.00)	3	15.93 ± 6.65 (9.80 - 23.00)
chum salmon *(Onoorhynchus keta)*	1 388.00	1	4.80	1	332.00	1	1000.00	1	1890.00	1	9.50
chinook salmon *(O. tshawytscha)*	2 15.20 ± 6.36 (10.70 - 19.70)	2	4.85 ± 0.21 (4.70 - 5.00)	2	1795.00 ± 714.18 (1290.00 - 2300.00)	2	860.00 ± 523.26 (490.00 - 1230.00)	2	2025.00 ± 1152.58 (1210.00 - 2840.00)	2	9.70 ± 0.42 (9.40 - 10.00)

rockfishes *(Sebastes spp.)*	40	13.63 ± 11.69 (3.90 - 62.20)	40	5.12 ± 1.68 (4.60 - 15.40)	40	1718.65 ± 1310.28 (512.00 - 7120.00)	40	1188.23 ± 99.94 (999.00 - 1390.00)	40	2319.50 ± 1469.08 (1030.00 - 7110.00)	40	9.70 ± 0.45 (9.10 - 12.00)
lingcod *(Ophiodon elongatus)*	13	10.99 ± 4.83 (5.80 - 20.10)	13	4.79 ± 0.12 (4.60 - 5.00)	13	611.15 ± 285.09 (262.00 - 1310.00)	13	1112.69 ± 83.64 (865.00 - 1220.00)	13	2322.69 ± 950.83 (785.00 - 4290.00)	13	9.58 ± 0.23 (9.10 - 9.90)
rex sole *(Glyptocephalus zachirus)*	3	9.93 ± 4.55 (5.30 - 14.40)	3	8.13 ± 4.29 (4.90 - 13.00)	3	2559.33 ± 1692.47 (788.00 - 4160.00)	3	912.67 ± 102.01 (817.00 - 1020.00)	3	5330.00 ± 2089.28 (4030.00 - 7740.00)	3	16.63 ± 9.11 (9.90 - 27.00)
rock sole *(Lepidopsetta bilineata)*	4	6.53 ± 2.26 (4.40 - 9.40)	4	6.18 ± 1.19 (5.00 - 7.80)	4	2475.50 ± 2110.39 (674.00 - 4760.00)	4	927.25 ± 125.98 (834.00 - 1110.00)	4	4802.50 ± 2113.66 (1710.00 - 6330.00)	4	16.00 ± 5.72 (11.00 - 24.00)
Dover sole *(Microstomus pacificus)*	5	14.47 ± 14.27 (5.90 - 39.60)	5	8.42 ± 7.06 (4.90 - 21.00)	5	1015.80 ± 440.80 (622.00 - 1720.00)	5	1149.80 ± 545.66 (766.00 - 2090.00)	5	9304.00 ± 5914.66 (5020.00 - 19600.00)	5	16.90 ± 14.10 (9.80 - 42.00)
slender sole *(Lyopsetta exilis)*	10	35.36 ± 20.57 (11.20 - 65.50)	10	22.70 ± 11.94 (8.30 - 48.00)	10	3610.00 ± 3517.93 (1150.00 - 11600.00)	10	922.30 ± 169.62 (587.00 - 1130.00)	10	5966.00 ± 2327.07 (3030.00 - 9770.00)	10	45.20 ± 23.53 (17.00 - 95.00)
English sole *(Parophrys vetulus)*	22	15.20 ± 16.92 (3.70 - 83.80)	22	5.30 ± 1.04 (4.60 - 9.50)	22	1847.64 ± 1552.93 (352.00 - 5100.00)	22	885.41 ± 103.66 (749.00 - 1060.00)	22	5827.73 ± 1439.94 (3300.00 - 8820.00)	22	10.61 ± 2.09 (9.30 - 19.80)

TABLE 5. Summary of trace metal (Mn,Al,Ba,Co,Mo,Sb) content data for crustaceans and fishes from Howe Sound, British Columbia, May 1977 to April 1978.

Common Name (Species)	TRACE METALS ($\mu g\ g^{-1}$) MANGANESE Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	ALUMINIUM Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	BARIUM Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	COBALT Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	MOLYBDENUM Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	SELENIUM Dry Wt. $\bar{x} \pm$ S.D. (Range)
CRUSTACEANS											
Dungeness crab *(Cancer magister)*	71	1.50 ± 0.96 (0.19 – 4.93)	71	28.43 ± 27.97 (9.30 – 174.00)	71	0.85 ± 0.86 (0.14 – 6.20)	71	0.97 ± 0.03 (0.83 – 1.00)	71	9.69 ± 0.28 (8.30 – 10.00)	71	4.85 ± 0.14 (4.20 – 5.00)
prawn *(Pandalus platyceros)*	93	0.94 ± 0.35 (0.37 – 2.25)	93	15.04 ± 1.99 (13.00 – 31.00)	93	0.16 ± 0.07 (0.13 – 0.83)	93	0.98 ± 0.05 (0.87 – 1.30)	93	9.79 ± 0.54 (8.70 – 13.00)	93	4.90 ± 0.28 (4.40 – 6.60)
side-stripe shrimp *(Pandalopsis dispar)*	10	23.42 ± 13.89 (9.20 – 50.30)	10	44.10 ± 26.45 (12.00 – 109.00)	10	0.85 ± 0.64 (0.20 – 2.33)	10	1.32 ± 0.42 (0.93 – 2.10)	10	13.18 ± 4.17 (9.30 – 21.00)	10	6.52 ± 1.96 (4.70 – 10.00)
spiny pink shrimp *(Pandalus borealis)*	33	8.71 ± 12.03 (0.73 – 38.80)	33	42.21 ± 17.92 (14.00 – 99.00)	33	0.52 ± 0.24 (0.16 – 1.20)	33	2.93 ± 1.23 (1.10 – 6.60)	33	29.33 ± 12.28 (11.00 – 66.00)	33	13.88 ± 6.89 (1.00 – 33.00)
FISHES											
spiny dogfish *(Squalus acanthias)*	70	0.49 ± 0.17 (0.23 – 1.11)	70	14.36 ± 0.79 (9.30 – 15.00)	70	0.22 ± 0.13 (0.14 – 0.75)	70	0.96 ± 0.03 (0.91 – 1.00)	70	9.57 ± 0.25 (9.10 – 10.00)	70	4.79 ± 0.12 (4.60 – 5.00)
Pacific herring *(Clupea harengus pallasi)*	3	2.25 ± 1.10 (1.03 – 3.18)	3	24.00 ± 9.54 (15.00 – 34.00)	3	0.24 ± 0.10 (0.15 – 0.34)	3	1.59 ± 0.67 (0.98 – 2.30)	3	15.93 ± 6.65 (9.80 – 23.00)	3	8.17 ± 3.58 (4.90 – 12.00)
chum salmon *(Oncorhynchus keta)*	1	6.59	1	14.00	1	0.16	1	0.95	1	9.50	1	4.80
chinook salmon *(O. tshawytscha)*	2	0.48 ± 0.24 (0.31 – 0.65)	2	14.50 ± 0.71 (14.00 – 15.00)	2	0.15 ± 0.01 (0.14 – 0.15)	2	0.97 ± 0.04 (0.94 – 1.00)	2	9.70 ± 0.42 (9.40 – 10.00)	2	4.85 ± 0.21 (4.70 – 5.00)

rockfishes *(Sebastes spp.)*	40	0.47 ± 0.39 (0.26 – 2.80)	40	11.19 ± 2.50 (9.10 – 18.00)	40	0.16 ± 0.04 (0.14 – 0.35)	40	0.97 ± 0.05 (0.91 – 1.20)	40	9.47 ± 1.45 (0.99 – 12.00)	40	4.84 ± 0.21 (4.60 – 5.90)
lingcod *(Ophiodon elongatus)*	13	0.60 ± 0.15 (0.34 – 0.91)	13	9.96 ± 3.27 (1.50 – 15.00)	13	0.15 ± 0.01 (0.14 – 0.15)	13	0.96 ± 0.02 (0.91 – 0.99)	13	9.58 ± 0.23 (9.10 – 9.90)	13	4.79 ± 0.12 (4.60 – 5.00)
rex sole *(Glyptocephalus zachirus)*	3	0.79 ± 0.15 (0.64 – 0.93)	3	16.63 ± 9.11 (9.90 – 27.00)	3	0.27 ± 0.11 (0.19 – 0.40)	3	1.65 ± 0.91 (0.99 – 2.70)	3	16.63 ± 9.11 (9.90 – 27.00)	3	8.13 ± 4.29 (4.90 – 13.00)
rock sole *(Lepidopsetta bilineata)*	4	1.36 ± 1.28 (0.53 – 3.26)	4	13.75 ± 2.22 (11.00 – 16.00)	4	0.23 ± 0.03 (0.19 – 0.25)	4	1.25 ± 0.27 (0.99 – 1.60)	4	12.48 ± 2.68 (9.90 – 16.00)	4	6.18 ± 1.19 (5.00 – 7.80)
Dover sole *(Microstomus pacificus)*	5	1.30 ± 0.58 (0.44 – 2.00)	5	16.90 ± 14.10 (9.80 – 42.00)	5	0.25 ± 0.21 (0.15 – 0.63)	5	1.69 ± 1.41 (0.98 – 4.20)	5	16.92 ± 14.09 (9.80 – 42.00)	5	8.42 ± 7.06 (4.90 – 21.00)
slender sole *(Lyopsetta exilis)*	10	2.45 ± 1.34 (0.60 – 5.54)	10	49.10 ± 23.31 (17.00 – 95.00)	10	0.79 ± 0.31 (0.25 – 1.40)	10	4.52 ± 2.35 (1.70 – 9.50)	10	45.20 ± 23.53 (17.00 – 95.00)	10	22.70 ± 11.94 (8.30 – 48.00)
English sole *(Parophrys vetulus)*	22	0.91 ± 0.87 (0.28 – 3.86)	22	13.04 ± 10.50 (9.30 – 59.00)	22	0.20 ± 0.13 (0.14 – 0.72)	22	1.06 ± 0.21 (0.93 – 1.90)	22	10.61 ± 2.09 (9.30 – 19.00)	22	5.30 ± 1.04 (4.60 – 9.50)

TABLE 6. Summary of trace metal (Sr,Ti,V,Se,P) content data for crustaceans and fishes from Howe Sound, British Columbia, May 1977 to April 1978.

Common Name (Species)	TRACE METALS ($\mu g\ g^{-1}$) STRONTIUM Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	TITANIUM Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	VANADIUM Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	SELENIUM Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	PHOSPHORUS Dry Wt. $\bar{x} \pm$ S.D. (Range)
CRUSTACEANS									
Dungeness crab *(Cancer magister)*	101.35 ± 108.58 (13.30 - 589.00)	71	1.27 ± 0.82 (0.47 - 4.47)	71	1.47 ± 0.05 (1.30 - 1.50)	71	4.86 ± 0.14 (4.20 - 5.00)	71	12581.27 ± 2716.46 (4620.00 - 18900.00)
prawn *(Pandalus platyceros)*	20.40 ± 12.27 (5.00 - 69.80)	93	0.98 ± 0.05 (0.87 - 1.30)	93	1.48 ± 0.09 (1.30 - 2.00)	93	4.90 ± 0.28 (4.40 - 6.60)	93	10916.02 ± 2444.63 (6850.00 - 17700.00)
side-stripe shrimp *(Pandalopsis dispar)*	56.37 ± 54.38 (8.40 - 193.00)	10	1.81 ± 1.07 (0.48 - 4.30)	10	1.97 ± 0.60 (1.40 - 3.10)	10	6.52 ± 1.96 (4.70 - 10.00)	10	11260.00 ± 581.53 (10300.00 - 11900.00)
spiny pink shrimp *(Pandalus borealis)*	31.06 ± 22.22 (7.00 - 96.30)	33	2.59 ± 1.33 (0.70 - 6.60)	33	4.41 ± 1.85 (1.60 - 9.90)	33	14.67 ± 6.20 (5.30 - 33.00)	33	8953.63 ± 1687.26 (1560.00 - 11300.00)
FISHES									
spiny dogfish *(Squalus acanthias)*	1.60 ± 2.66 (0.28 - 19.40)	70	0.95 ± 0.07 (0.47 - 1.10)	70	1.44 ± 0.05 (1.40 - 1.50)	70	4.79 ± 0.12 (4.60 - 5.00)	70	8454.71 ± 1303.19 (5100.00 - 10600.00)
Pacific herring *(Clupea harengus pallasi)*	2.98 ± 1.20 (2.00 - 4.32)	3	1.59 ± 0.67 (0.98 - 2.30)	3	2.40 ± 0.95 (1.50 - 3.40)	3	8.17 ± 3.58 (4.90 - 12.00)	3	10780.00 ± 2613.27 (8440.00 - 13600.00)
chum salmon *(Oncorhynchus keta)*	1.64	1	0.95	1	1.40	1	4.80	1	9900.00
chinook salmon *(O. tshawytscha)*	4.58 ± 3.22 (2.30 - 6.85)	2	0.97 ± 0.04 (0.94 - 1.00)	2	1.45 ± 0.07 (1.40 - 1.50)	2	4.85 ± 0.21 (4.70 - 5.00)	2	9950.00 ± 5586.15 (6000.00 - 13900.00)

rockfishes *(Sebastes spp.)*	40	4.82 ± 4.35 (0.55 - 21.00)	40	0.65 ± 0.24 (0.46 - 1.20)	40	1.46 ± 0.07 (1.40 - 1.80)	40	4.85 ± 0.21 (4.60 - 5.90)	40	9671.25 ± 1671.42 (1000.00 - 12600.00)
lingcod *(Ophiodon elongatus)*	13	1.21 ± 0.86 (0.15 - 3.15)	13	0.52 ± 0.14 (0.46 - 0.99)	13	1.45 ± 0.05 (1.40 - 1.50)	13	4.79 ± 0.12 (4.60 - 5.00)	13	10249.23 ± 1115.15 (6860.00 - 11400.00)
rex sole *(Glyptocephalus zachirus)*	3	15.53 ± 10.68 (3.20 - 21.80)	3	0.81 ± 0.43 (0.49 - 1.30)	3	2.47 ± 1.34 (1.50 - 4.00)	3	8.13 ± 4.29 (4.90 - 13.00)	3	8356.66 ± 404.61 (7900.00 - 8670.00)
rock sole *(Lepidopsetta bilineata)*	4	8.53 ± 6.91 (2.50 - 14.90)	4	0.74 ± 0.19 (0.57 - 0.99)	4	1.85 ± 0.34 (1.50 - 2.30)	4	6.18 ± 1.19 (5.00 - 7.80)	4	8985.00 ± 1442.37 (7730.00 - 10900.00)
Dover sole *(Microstomus pacificus)*	5	3.30 ± 1.29 (2.30 - 5.38)	5	0.84 ± 0.71 (0.49 - 2.10)	5	2.54 ± 2.11 (1.50 - 6.30)	5	8.42 ± 7.06 (4.90 - 21.00)	5	10478.00 ± 4468.20 (7750.00 - 18400.00)
slender sole *(Lyopsetta exilis)*	10	20.36 ± 18.07 (5.07 - 59.60)	10	2.50 ± 1.20 (0.83 - 4.80)	10	6.77 ± 3.51 (2.50 - 14.00)	10	22.70 ± 11.94 (8.30 - 48.00)	10	8410.00 ± 2059.38 (5210.00 - 12800.00)
English sole *(Parophrys vetulus)*	22	10.69 ± 11.15 (1.40 - 51.50)	22	0.68 ± 0.66 (0.46 - 3.60)	22	1.60 ± 0.31 (1.40 - 2.80)	22	5.30 ± 1.04 (4.60 - 9.50)	22	9379.54 ± 785.50 (8420.00 - 11600.00)

TABLE 7. Trace metal content data for crustaceans and fishes from Howe Sound, British Columbia, May 1977 to April 1978.

SITE	DATE	SMP NO.	SP.S	LENGTH (cm)	WEIGHT (g)	TRACE METALS (ug/g) Hg wet	Hg dry	Cu dry	Fe dry	Pb dry	Zn dry	Ca dry	Mg dry	Na dry	Cd dry
ZONE 1															
Dungeness crab, *Cancer magister*															
A	77 11 16	127	01 M	19.00		0.280	1.500	40.10	46.80	<4.90	229.00	2520.	1560.	7770.	<0.49
A	77 11 16	128	01 M	19.80		0.390	2.200	62.10	75.50	<4.90	241.00	7740.	1850.	11300.	<0.49
A	77 11 17	146	01 M	17.90		0.150	0.750	31.00	26.70	<5.00	185.00	3490.	1330.	9020.	<0.50
A	77 11 17	147	01 M	18.20		0.290	1.400	83.00	32.80	<4.90	191.00	1640.	1240.	12900.	<0.49
A	77 11 17	148	01 M	17.90		0.170	0.830	77.80	49.90	<4.90	185.00	2190.	1270.	14600.	<0.49
A	77 11 17	174	01 M	19.60		0.290	1.500	59.00	33.80	<4.70	211.00	6270.	1440.	8170.	<0.47
A	77 11 17	175	01 M	18.70		0.370	1.800	47.60	39.00	<4.70	202.00	12800.	1670.	7330.	<0.47
A	77 11 17	176	01 M	17.90		0.420	2.000	49.60	49.90	<4.90	222.00	7360.	1610.	8260.	<0.49
A	77 11 17	177	01 M	18.70		0.260	1.200	47.00	44.00	<4.90	176.00	12000.	1570.	8540.	<0.49
A	77 11 17	178	01 M	21.20		0.160	0.810	57.80	40.90	<4.80	200.00	12000.	1560.	9610.	<0.48
Prawn, *Pandalus platyceros*															
B	77 11 17	179	02		3.30	23.70	0.060	0.270	40.40	20.90	<4.80	49.70	2690.	1440.	7480.	<0.48
B	77 11 17	180	02 F		4.28	54.94	0.200	0.970	27.90	8.30	<4.80	51.40	1960.	1590.	8230.	<0.48
B	77 11 17	181	02 F		4.00	40.07	0.170	0.800	37.50	16.70	<5.00	55.20	2860.	1750.	9370.	<0.50
B	77 11 17	182	02		2.78	13.34	0.034	0.160	28.20	7.90	<6.60	83.40	3660.	1580.	10900.	<0.66
B	77 11 17	183	02		3.25	23.76	0.130	0.690	39.10	12.00	<5.00	53.40	2640.	1680.	13400.	<0.50
B	77 11 17	184	02		3.68	11.90	0.025	0.110	87.50	18.80	<6.50	51.90	2830.	1470.	8790.	<0.65
B	77 11 17	185	02		2.70	14.20	0.065	0.290	35.50	19.90	<5.20	50.50	1770.	1350.	7570.	<0.52
B	77 11 17	186	02		3.33	22.18	0.140	0.680	21.60	10.10	<5.00	53.20	4720.	1780.	10800.	<0.50
B	77 11 17	187	02 F		4.19	53.52	0.200	0.950	39.80	11.70	<4.80	56.90	2900.	1840.	9080.	<0.48
B	77 11 17	188	02		3.35	20.57	0.094	0.440	22.70	16.50	<4.90	53.60	4700.	1680.	9170.	<0.49
Spiny dogfish, *Squalus acanthias*															
A	77 11 16	122	05 F		99.00	4620.00	1.500	5.600	4.50	6.90	<4.90	9.40	182.	677.	2460.	<0.49
A	77 11 16	123	05 F		99.00	4180.00	0.860	3.900	6.70	11.70	<4.70	12.60	290.	894.	2900.	<0.47
A	77 11 16	124	05 F		85.20	3100.00	1.100	4.700	3.40	8.60	<4.80	11.00	318.	857.	3450.	<0.48
A	77 11 16	125	05 F		104.20	5300.00	1.500	5.800	7.40	4.70	<4.80	8.20	221.	759.	2910.	<0.48
A	77 11 16	126	05 F		89.50	3250.00	0.860	3.900	4.70	9.30	<4.80	14.90	299.	909.	3050.	<0.48
A	77 11 17	155	05 F		91.10	3000.00	0.930	4.000	2.53	8.51	<4.60	11.70	435.	651.	4050.	<0.46
A	77 11 17	156	05 F		91.00	3300.00	0.600	2.700	16.60	10.40	<4.70	10.70	207.	824.	2930.	<0.47
A	77 11 17	157	05 F		98.00	3600.00	1.300	5.700	5.20	13.50	<4.80	11.00	216.	749.	3160.	<0.48
A	77 11 17	158	05 F		89.80	3000.00	0.440	1.600	7.40	15.80	<4.70	10.70	190.	646.	3360.	<0.47
A	77 11 17	159	05 F		103.40	5000.00	1.500	5.300	6.90	10.20	<4.60	7.90	156.	580.	2680.	<0.46
Pacific herring, *Clupea harengus pallasi*															
A	77 11 16	134	06		15.50	57.80	0.024	0.079	1.80	15.00	<4.90	11.50	2490.	804.	1220.	<0.49
Chinook salmon, *Oncorhynchus tshawytscha*															
A	77 11 16	133	07		23.00	145.70	0.064	0.310	2.00	10.70	<4.70	22.60	2300.	1230.	2840.	<0.47
Surf smelt, *Hypomesus pretiosus pretiosus*															
A	77 11 16	135	08		13.00	16.70	0.037	0.150	5.90	23.30	<5.70	71.40	5550.	1230.	4120.	<0.57
ZONE 2															
Dungeness crab, *Cancer magister*															
A	77 11 16	129	01 M	18.50		0.330	1.900	55.00	76.20	<5.00	194.00	3870.	1520.	9560.	<0.50
A	77 11 16	130	01 M	18.10		0.320	2.000	63.80	139.00	<5.00	253.00	8420.	1780.	15400.	<0.50
A	77 11 16	131	01 M	17.50		0.370	2.200	40.20	132.00	<5.00	243.00	8980.	2230.	15500.	<0.50
A	77 11 16	132	01 M	17.00		0.340	1.600	44.00	156.00	<4.90	211.00	8540.	1850.	9350.	<0.49
A	77 11 16	149	01 M	17.50		0.390	2.200	92.00	101.00	<4.90	214.00	5920.	1510.	17800.	<0.49

TABLE 7. (Continued)

SITE	DATE	SMP NO.	SP.S	LENGTH (cm)	WEIGHT (g)	TRACE METALS (ug/g) Hg wet	Hg dry	Cu dry	Fe dry	Pb dry	Zn dry	Co dry	Mg dry	Na dry	Cd dry
A	77 11 17	150	01 M	18.10		0.190	1.000	48.60	72.40	<5.00	175.00	3270.	1320.	14800.	<0.50
A	77 11 17	151	01 M	17.40		0.380	1.800	48.80	31.50	<4.80	244.00	12500.	1930.	17800.	<0.48
A	77 11 17	152	01 M	17.00		0.230	1.400	57.30	84.60	<4.80	198.00	5000.	1490.	24600.	<0.48
A	77 11 17	153	01 M	17.20		0.140	0.720	72.50	75.80	<4.70	231.00	6820.	1390.	13300.	<0.47
A	77 11 17	154	01 M	17.60		0.300	1.300	53.70	68.30	<4.90	196.00	2860.	1190.	9770.	<0.49
Prawn, Pandalus platyceros															
C	77 11 17	189	02 F	4.29	59.05	0.170	0.710	29.60	13.60	<4.90	50.80	1820.	1410.	7880.	<0.49
C	77 11 17	190	02	3.98	43.61	0.180	0.790	33.90	11.10	<4.90	57.90	1990.	1440.	7880.	<0.50
C	77 11 17	191	02 F	4.04	48.31	0.250	0.780	18.10	9.90	<4.90	36.70	1150.	1000.	5900.	<0.49
C	77 11 17	192	02 F	4.13	49.21	0.230	1.200	28.50	16.00	<4.80	59.00	4310.	1960.	11200.	<0.48
C	77 11 17	193	02 F	4.09	50.10	0.190	0.850	33.20	12.70	<5.00	50.50	2470.	1740.	8750.	<0.50
C	77 11 17	194	02	3.25	22.56	0.070	0.310	30.90	12.90	<4.40	49.20	2290.	1340.	7850.	<0.44
C	77 11 17	195	02	3.06	19.65	0.072	0.320	24.40	18.90	<4.90	47.50	2230.	1490.	7510.	<0.49
C	77 11 17	196	02 F	4.19	55.23	0.250	0.790	29.50	11.00	<4.80	40.40	1490.	1290.	7820.	<0.48
C	77 11 17	197	02	3.58	29.76	0.100	0.440	31.40	10.90	<5.00	48.70	2320.	1560.	8900.	<0.50
C	77 11 17	198	02 F	4.48	60.76	0.270	1.400	23.60	17.40	<4.90	53.30	2560.	1940.	4100.	<0.49
Spiny dogfish, Squalus acanthias															
C	77 11 16	136	05 F	95.50	4420.00	1.900	7.700	11.30	5.00	<4.90	9.70	226.	694.	3540.	<0.49
C	77 11 16	137	05 F	79.00	2020.00	0.500	2.200	1.80	19.10	<4.90	11.80	284.	757.	3380.	<0.49
C	77 11 16	138	05 F	78.50	2000.00	0.380	1.800	0.98	6.70	<4.90	12.50	315.	847.	4330.	<0.49
C	77 11 16	139	05 F	83.20	2300.00	0.750	3.600	6.80	9.80	<4.70	13.20	320.	802.	3740.	<0.47
C	77 11 16	140	05 F	82.00	2120.00	0.540	2.300	17.50	7.50	<4.90	10.40	275.	719.	4440.	<0.49
C	77 11 17	160	05 F	91.70	3250.00	0.810	3.100	3.70	11.80	<4.70	17.70	198.	737.	3730.	<0.47
C	77 11 17	161	05 M	75.50	1550.00	0.480	1.800	2.40	22.50	<4.70	12.10	194.	682.	4300.	<0.47
C	77 11 17	162	05 M	74.40	1300.00	0.280	1.300	8.50	15.80	<5.00	13.10	285.	941.	9820.	<0.50
C	77 11 17	163	05 F	75.80	1400.00	0.530	2.300	5.20	8.40	<4.70	11.90	215.	814.	3830.	<0.47
C	77 11 17	164	05 F	96.30	4400.00	0.550	1.800	4.60	5.90	<4.80	6.50	203.	600.	2730.	<0.48
Rex sole, Glyptocephalus zachirus															
B	77 08 04	03T	09	35.00	2.78	0.087	0.461	<1.30	5.30	<6.50	13.90	788.	1020.	7740.	<0.65
Flathead sole, Hippoglossoides elassodon															
B	78 04 12	08R	10	19.40	52.70	0.200	1.000	<2.10	13.20	<11.00	18.00	1600.	1050.	4810.	<1.10
B	78 04 12	09R	10	18.40	52.50	0.220	1.300	<2.90	18.50	<15.00	17.10	1910.	1040.	5910.	<1.50
B	78 04 12	10R	10	22.20	92.30	0.580	3.300	<2.10	84.00	<11.00	15.70	969.	1050.	5450.	<1.10
Rock sole, Lepidopsetta bilineata															
B	77 08 04	05T	11	23.70	141.00	0.044	0.212	<1.30	5.10	<6.20	17.90	674.	855.	5210.	<0.62
B	77 08 04	06T	11	21.30	110.00	0.046	0.221	<1.60	4.40	<7.80	17.00	688.	834.	5960.	<0.78
B	77 08 04	07T	11	21.60	96.00	0.031	0.133	<1.10	7.20	<5.70	22.30	3780.	910.	6330.	<0.57
Slender sole, Lyopsetta exilis															
B	77 10 01	13T	12	18.90	41.00	0.678	3.690	<3.20	63.90	<16.00	16.90	2930.	1080.	9770.	<1.60
B	77 10 01	14T	12	19.60	33.00	0.876	4.570	<4.60	54.50	<23.00	25.60	11600.	1130.	8320.	<2.30
Dover sole, Microstomus pacificus															
B	77 08 04	15T	13	27.30	184.00	0.105	0.544	<0.98	6.54	<4.90	15.30	622.	969.	5020.	<0.49
English sole, Parophrys vetulus															
B	77 08 04	01T	14	27.20	180.00	0.023	0.100	<1.90	10.80	<9.50	23.30	5100.	962.	5530.	<0.95
B	77 08 04	02T	14	36.20	370.00	0.032	0.149	<1.10	7.10	<5.40	24.70	2810.	956.	5030.	<0.54
B	77 08 04	04T	14	32.90	292.00	0.037	0.174	<0.97	5.10	<4.90	22.80	2580.	985.	6340.	<0.49
B	77 08 04	08T	14	21.00	73.00	0.021	0.099	<1.20	5.00	<5.90	20.80	2220.	973.	6360.	<0.59

TABLE 7. (Continued)

SITE	DATE	SMP NO.	SP.S	LENGTH (cm)	WEIGHT (g)	TRACE METALS (ug/g) Hg wet	Hg dry	Cu dry	Fe dry	Pb dry	Zn dry	Co dry	Mg dry	Na dry	Cd dry
B	77 08 04	09T	14	30.50	219.00	0.024	0.108	11.70	6.60	<4.90	17.60	4920.	972.	5970.	<0.49
B	77 08 04	10T	14	25.40	130.00	0.028	0.120	<0.94	5.00	<4.70	17.30	5040.	1000.	4920.	<0.47
B	77 08 04	11T	14	25.00	126.00	0.017	0.081	<2.30	7.00	<5.90	18.80	3440.	1060.	7650.	<0.59
B	77 08 04	12T	14	28.60	206.00	0.022	0.101	<0.93	3.70	<4.60	15.40	2400.	1030.	4540.	<0.46
B	77 10 01	16T	14	25.20	161.00	0.062	0.315	<0.94	7.23	<4.70	17.10	1590.	989.	4170.	<0.47
B	77 10 01	17T	14	22.40	97.00	0.042	0.210	<1.20	9.00	<6.20	16.00	578.	884.	4250.	<0.62
B	77 10 01	18T	14	36.10	523.00	0.058	0.159	<0.99	4.40	<5.00	15.20	352.	956.	3300.	<0.50
ZONE 3															
Dungeness crab, Cancer magister															
D	77 11 16	145	01 M	16.50		0.240	1.100	49.70	43.90	<4.90	170.00	3160.	1310.	10500.	<0.49
D	77 11 17	173	01 M	19.60		0.085	0.360	38.30	13.80	<4.20	166.00	4170.	1310.	5710.	<0.42
D	77 11 18	202	01 M	16.70		0.180	0.780	66.70	22.40	<5.00	200.00	1310.	1530.	9710.	<0.50
D	77 11 18	203	01 M	16.70		0.160	0.830	30.20	31.70	<4.90	200.00	4480.	1550.	1660.	<0.49
D	77 11 18	204	01 M	18.60		0.035	0.180	42.30	33.50	<5.00	174.00	2480.	1690.	15900.	<0.50
D	77 11 18	205	01 M	18.50		0.280	1.400	49.50	45.70	<4.90	222.00	2930.	1710.	9840.	<0.49
D	77 11 18	206	01 M	16.50		0.071	0.310	68.00	26.80	<4.90	188.00	8540.	1740.	10700.	<0.49
D	77 11 18	207	01 M	16.50		0.350	1.800	35.70	57.70	<4.90	199.00	1930.	1800.	10600.	<0.49
D	77 11 18	324	01 M	16.50		0.061	0.338	58.00	18.70	<4.90	267.00	4910.	1990.	20800.	<0.49
D	77 11 18	325	01 M	16.50		0.143	0.762	56.80	63.70	<5.00	306.00	5000.	2551.	17900.	<0.50
Prawn, Pandalus platyceros															
B	77 12 01	223	02 F	4.52	58.10	0.140	0.630	18.60	9.50	<4.90	50.40	974.	1660.	5970.	<0.49
B	77 12 01	224	02 F	4.20	47.30	0.070	0.340	20.70	12.90	<4.90	58.90	1140.	1640.	9500.	<0.49
B	77 12 01	225	02 M	2.05	3.10	0.015	0.063								
Spiny dogfish, Squalus acanthias															
D	77 11 16	143	05 F	89.20	3020.00	0.870	3.300	2.90	4.50	<4.80	10.00	263.	684.	4330.	<0.48
D	77 11 16	144	05 F	90.00	3100.00	1.100	4.900	5.30	7.30	<4.90	11.90	439.	794.	4780.	<0.49
D	77 11 17	165	05 F	87.80	2750.00	1.200	4.800	5.30	12.00	<4.60	10.40	197.	752.	3720.	<0.46
D	77 11 17	166	05 F	72.00	1400.00	0.400	1.500	10.90	8.40	<4.90	10.40	195.	669.	3170.	<0.49
D	77 11 17	167	05 F	95.30	3500.00	0.650	2.200	9.90	5.50	<4.90	8.50	177.	609.	3100.	<0.49
D	77 11 17	168	05 F	60.90	700.00	0.480	2.300	7.00	12.90	<4.80	16.20	430.	996.	4680.	<0.48
D	77 11 17	169	05 F	74.80	1450.00	0.430	1.900	5.20	10.20	<5.00	13.70	274.	924.	3440.	<0.50
D	77 11 18	199	05 M	67.40	1100.00	0.570	2.200	55.90	18.80	<4.60	11.60	220.	890.	2780.	<0.46
D	77 11 18	200	05 M	74.20	1500.00	0.230	0.850	2.10	5.60	<4.70	11.10	204.	818.	3250.	<0.47
D	77 11 18	201	05 F	96.30	4100.00	0.630	2.100	19.00	6.10	<4.70	6.80	2630.	787.	2170.	<0.47
Ratfish, Hydrolagus colliei															
A	77 05 10	34T	15	50.00	553.00	0.134	0.613	1.40	27.70	<4.60	15.80	418.	786.	7660.	<0.46
A	77 05 10	50T	15	49.00	550.00	0.454	2.340	2.10	36.50	<5.00	22.10	601.	733.	11500.	<0.50
A	77 05 10	51T	15	49.00	525.00	0.568	2.570	2.10	14.80	<5.00	14.70	325.	832.	6930.	<0.50
Walleye pollock, Theragra chalcogramma															
A	77 05 10	52T	16	29.00	136.00	0.149	0.792	6.30	38.70	<5.30	26.40	2290.	2000.	4450.	<0.53
Quillback rockfish, Sebastes maliger															
C	78 01 26	299	17	32.00	550.00	0.531	2.480	2.40	5.10	<4.90	12.70	609.	1180.	1740.	<0.49
C	78 01 26	300	17	34.40	650.00	0.992	4.850	11.80	11.60	<4.80	15.50	1010.	1210.	1760.	<0.48
C	78 01 26	301	17	25.90	270.00	0.178	0.826	3.70	19.30	<4.90	16.70	3570.	1180.	2530.	<0.49
C	78 01 26	302	17	28.00	360.00	0.184	0.841	2.40	12.00	<4.80	13.40	2140.	1160.	1870.	<0.48
C	78 01 26	303	17	24.40	250.00	0.151	0.699	<0.94	11.70	<4.70	13.90	4720.	1200.	2080.	<0.47
Lingcod, Ophiodon elongatus															
C	78 01 25	294	18 M	51.00	1200.00	0.103	0.470	2.90	14.00	<4.70	22.50	1310.	1220.	1850.	<0.47
C	78 01 25	295	18 M	57.00	1800.00	0.145	0.693	4.20	14.30	<4.70	18.80	815.	1180.	1850.	<0.47

TABLE 7. (Continued)

SITE	DATE	SMP NO.	SP.S	LENGTH (cm)	WEIGHT (g)	TRACE METALS (ug/g) Hg wet	Hg dry	Cu dry	Fe dry	Pb dry	Zn dry	Ca dry	Mg dry	Na dry	Cd dry
C	78 01 25	296	18 M	65.40	2750.00	0.677	3.170	10.20	20.10	<4.70	38.00	630.	1130.	1870.	<0.47
C	78 01 25	297	18 F	77.50	5400.00	0.604	2.950	5.10	17.50	<4.80	45.80	516.	1090.	2640.	<0.48
C	78 01 25	298	18 M	64.60	2700.00	0.545	2.530	3.70	9.40	<4.60	38.20	425.	1110.	2100.	<0.46
Rex sole, Glyptocephalus zachirus															
A	77 05 10	37T	09	15.00	19.00	0.106	0.523	<2.70	14.40	<13.00	14.40	2730.	817.	4030.	<1.30
A	77 05 10	38T	09	19.00	39.00	0.730	4.480								
A	77 05 10	39T	09	20.00	55.00	0.749	3.840	<0.99	10.10	<4.90	14.50	4160.	901.	4220.	<0.49
Rock sole, Lepidopsetta bilineata															
A	77 11 18	208	11	30.00	299.00	0.041	0.180	12.40	9.40	<5.00	18.20	4760.	1110.	1710.	<0.50
Slender sole, Lyopsetta exilis															
A	77 05 10	31T	12	18.00	34.50	0.381	2.200	<9.50	42.60	<48.00	9.50	1470.	947.	5400.	<4.80
A	77 05 10	32T	12	17.50	31.00	0.590	2.940	<4.60	13.00	<23.00	5.90	3340.	776.	4480.	<2.30
A	77 05 10	33T	12	18.50	36.50	0.219	1.130	<1.70	11.20	<8.30	11.60	2650.	816.	4080.	<0.83
Dover sole, Microstomus pacificus															
A	78 04 11	01R	13	22.90	99.50	0.039	0.220	<1.30	12.30	<6.30	15.60	1150.	1130.	8720.	<0.63
A	78 04 11	02R	13	25.10	111.20	0.050	0.290	<4.20	39.60	<21.00	25.90	1720.	2090.	19600.	<2.10
English sole, Parophrys vetulus															
A	77 05 10	30T	14	31.00	210.00	0.102	0.507	11.00	83.80	<4.80	22.20	2000.	853.	3360.	<0.48
A	77 05 10	40T	14	31.00	206.00	0.159	0.906	<0.98	12.20	<4.90	16.20	602.	771.	6280.	<0.49
A	77 05 10	41T	14	27.00	138.00	0.053	0.305	1.20	22.30	<4.90	17.50	922.	844.	6360.	<0.49
A	77 05 10	42T	14	29.00	192.00	0.102	0.529	1.50	29.80	<5.00	19.90	981.	826.	5020.	<0.50
A	77 05 10	43T	14	30.00	190.00	0.062	0.357	<1.20	20.50	<5.80	19.80	618.	749.	8160.	<0.58
A	77 05 10	44T	14	33.00	270.00	0.106	0.595	6.10	15.70	<4.90	16.60	512.	808.	6560.	<0.49
A	77 05 10	45T	14	30.00	205.00	0.290	1.620	2.20	25.10	<4.80	20.20	773.	755.	6640.	<0.48
A	77 05 10	46T	14	28.00	165.00	0.139	0.738	2.00	14.30	<4.80	18.20	1010.	773.	5730.	<0.48
A	77 05 10	47T	14	29.00	210.00	0.125	0.689	5.30	11.70	<5.00	18.80	635.	795.	5990.	<0.50
A	77 05 10	48T	14	30.00	223.00	0.194	1.120	1.60	12.80	<4.90	20.30	743.	786.	7230.	<0.49
A	77 05 10	49T	14	32.00	225.00	0.105	0.625	1.30	15.30	<5.00	22.50	822.	752.	8820.	<0.50
ZONE 4															
Dungeness crab, Cancer magister															
B	77 12 01	226	01 M	19.10		0.100	0.560	37.10	25.80	<4.90	230.00	2700.	1850.	18500.	<0.49
B	77 12 01	227	01 M	18.00		0.220	1.300	21.50	44.20	<4.80	253.00	2730.	1890.	19500.	<0.48
B	77 12 01	228	01 M	17.20		0.095	0.470	27.20	23.20	<4.70	218.00	1740.	1780.	13700.	<0.47
B	77 12 01	229	01 M	17.50		0.098	0.460	29.90	26.30	<4.80	206.00	2020.	1680.	12700.	<0.48
B	77 12 01	230	01 M	17.50		0.048	0.320	43.10	25.30	<5.00	223.00	7720.	3590.	37200.	<0.50
B	77 12 01	231	01 M	17.50		0.049	0.340	49.60	35.50	<5.00	176.00	7090.	2740.	28900.	<0.50
B	77 12 01	232	01 M	18.40		0.110	0.540	33.30	38.50	<5.00	287.00	2100.	1780.	14000.	<0.50
B	77 12 01	233	01 M	16.70		0.100	0.500	40.90	24.60	<4.90	226.00	2290.	1630.	14100.	<0.49
B	77 12 01	234	01 M	17.20		0.098	0.490	28.50	24.30	<4.90	204.00	4840.	1990.	17300.	<0.49
B	77 12 01	235	01 M	16.70		0.240	1.100	33.10	31.50	<4.60	225.00	2250.	1700.	14300.	<0.47
Spiny dogfish, Squalus acanthias															
B	77 10 28	052	05 M	72.10	1340.00	0.750	3.300	12.90	11.40	<4.80	14.20	295.	923.	3970.	<0.48
B	77 10 28	053	05 F	110.50	4800.00	1.600	6.000	1.50	8.40	<4.90	12.60	1080.	666.	3090.	<0.49
B	77 10 28	054	05 F	94.20	3700.00	1.300	5.000	2.70	5.70	<4.70	11.40	667.	787.	3220.	<0.47
B	77 10 28	055	05 F	91.00	3350.00	1.300	5.900	2.20	4.90	<4.90	9.50	255.	861.	3010.	<0.49
B	77 10 28	056	05 F	76.70	2190.00	0.960	3.900	13.30	8.80	<4.70	10.40	298.	837.	2970.	<0.47
B	77 10 28	057	05 F	58.80	700.00	0.190	1.000	0.93	15.10	<4.60	11.40	378.	1030.	5710.	<0.46
B	77 11 16	141	05 M	76.00	1520.00	0.260	1.200	2.00	10.20	<4.90	19.10	336.	857.	5310.	<0.49
B	77 11 16	142	05 F	108.00	5450.00	1.600	5.500	20.00	7.00	<4.90	10.50	215.	646.	1410.	<0.49

TABLE 7. (Continued)

SITE	DATE	SMP NO.	SP.S	LENGTH (cm)	WEIGHT (g)	TRACE METALS (ug/g) Hg wet	Hg dry	Cu dry	Fe dry	Pb dry	Zn dry	Ca dry	Mg dry	Na dry	Cd dry
B	77 11 17	171	05 F	105.80	5000.00	0.860	2.300	8.90	8.00	<4.80	9.20	137.	417.	1780.	<0.48
B	77 11 17	172	05 F	93.70	3000.00	0.880	2.900	5.70	9.50	<4.70	10.20	160.	547.	2450.	<0.47
Copper rockfish, Sebastes caurinus															
B	78 01 26	292	19	34.00	550.00	0.228	1.050	10.60	8.80	<4.60	16.30	732.	1190.	1670.	<0.46
Quillback rockfish, Sebastes maliger															
B	78 01 26	288	17	39.00	1000.00	1.000	4.830	1.40	5.80	<5.00	17.10	629.	1130.	2860.	<0.50
B	78 01 26	289	17	34.60	800.00	0.300	1.300	2.30	4.20	<5.00	16.40	1140.	1180.	2900.	<0.50
B	78 01 26	290	17	37.40	1000.00	0.365	1.570	1.30	9.80	<4.80	15.40	550.	1060.	2510.	<0.48
B	78 01 26	291	17	31.00	450.00	0.213	1.000	1.00	13.80	<4.80	17.80	1520.	1250.	2040.	<0.48
Kelp greenling, Hexagrammos decagrammus															
B	78 01 26	293	20 M	39.50	900.00	0.590	2.880	3.70	14.00	<4.90	16.60	2550.	1210.	1890.	<0.49
Lingcod, Ophiodon elongatus															
B	78 01 26	285	18 M	69.10	3250.00	0.271	1.230	1.20	16.00	<4.80	36.80	262.	1120.	3220.	<0.48
B	78 01 26	286	18 M	56.00	1550.00	0.104	0.465	1.60	7.70	<4.90	27.60	546.	1120.	3300.	<0.49
B	78 01 26	287	18 M	49.80	1700.00	0.116	0.542	8.60	10.60	<4.80	26.60	763.	1160.	3230.	<0.48
Slender sole, Lyopsetta exilis															
C	78 04 12	03R	12	18.90	41.30	0.670	3.500	<4.20	26.00	<21.00	11.90	1920.	826.	5050.	<2.10
C	78 04 12	04R	12	18.90	40.80	0.490	2.600	<7.10	19.20	<36.00	8.00	1150.	1080.	4970.	<3.40
C	78 04 12	05R	12	18.30	45.00	0.360	2.100	<4.80	20.20	<24.00	5.30	1280.	587.	3030.	<2.40
A	78 04 12	06R	12	21.80	66.80	0.410	2.500	<3.80	65.50	<19.00	19.00	1420.	1020.	9370.	<1.90
A	78 04 12	07R	12	19.00	44.30	0.190	0.910	<1.70	37.50	<8.70	18.80	8340.	961.	5190.	<0.87
ZONE 5															
Dungeness crab, Cancer magister															
D	77 10 26	029	01 M	18.00		0.170	0.950	45.20	56.20	<4.90	282.00	9390.	1890.	12600.	<0.49
D	77 10 26	030	01 M	18.20		0.130	0.570	27.10	37.40	<4.90	176.00	19800.	1660.	6000.	<0.49
D	77 10 26	031	01 M	17.20		0.078	0.350	45.20	27.90	<4.60	202.00	27400.	1880.	7760.	<0.46
D	77 10 26	032	01 M	17.10		0.100	0.420	62.10	24.60	<4.90	190.00	15100.	1620.	7920.	<0.49
D	77 10 26	033	01 M	17.30		0.110	0.480	38.60	15.20	<5.00	203.00	11600.	1570.	8090.	<0.50
D	77 10 26	034	01 M	16.90		0.072	0.310	33.60	14.40	<4.80	177.00	22400.	1810.	8150.	<0.48
D	77 10 26	035	01 M	17.40		0.150	0.680	47.40	31.30	<5.00	245.00	4880.	1620.	8820.	<0.50
D	77 10 26	036	01 M	18.50		0.076	0.340	53.20	19.10	<4.90	183.00	3920.	1390.	8940.	<0.49
D	77 10 26	037	01 M	17.90		0.140	0.730	47.50	33.50	<4.90	227.00	4050.	1650.	11000.	<0.49
C	77 10 26	051	01 M	17.70		0.097	0.540	27.00	29.40	<4.90	172.00	6090.	1570.	11700.	<0.49
Prawn, Pandalus platyceros															
A	77 11 04	100	02 F	4.60	61.80	0.190	0.820	17.20	7.00	<4.90	50.50	899.	1400.	8520.	<0.49
A	77 11 04	101	02 F	4.10	47.50	0.110	0.490	18.00	8.10	<4.70	52.50	1060.	1400.	7800.	<0.47
A	77 11 04	102	02 F	4.60	67.40	0.320	1.600	18.70	10.90	<4.70	56.00	1070.	1400.	10600.	<0.47
A	77 11 04	103	02 F	4.30	47.90	0.140	0.600	18.70	6.50	<4.80	48.60	949.	1340.	7860.	<0.48
A	77 11 04	104	02 F	4.20	47.90	0.160	0.700	18.40	7.70	<5.00	52.00	1030.	1340.	6610.	<0.50
A	77 11 04	105	02 F	4.30	51.50	0.180	0.760	17.20	8.20	<5.00	47.80	3230.	1380.	8020.	<0.50
A	77 11 04	106	02 F	4.10	51.40	0.210	0.920	15.50	6.40	<4.80	48.50	798.	1280.	5970.	<0.48
A	77 11 04	107	02 F	4.20	49.60	0.150	0.680	18.80	8.50	<5.00	50.50	1910.	1330.	7290.	<0.50
A	77 11 04	108	02 F	4.20	47.20	0.150	0.660	22.10	6.90	<4.70	52.30	1110.	1490.	8510.	<0.47
A	77 11 04	109	02 F	4.50	67.80	0.260	1.200	17.00	8.10	<5.00	51.10	1060.	1430.	8450.	<0.50
Spiny pink shrimp, Pandalus borealis															
A	77 11 04	110	03	2.26	7.79	0.081	0.340	24.20	6.80	<14.00	44.60	2580.	1290.	10700.	<1.40

TABLE 7. (Continued)

SITE	DATE	SMP NO.	SP.S	LENGTH (cm)	WEIGHT (g)	TRACE METALS (ug/g) Hg wet	Hg dry	Cu dry	Fe dry	Pb dry	Zn dry	Ca dry	Mg dry	Na dry	Cd dry
A	77 11 04	111	03	2.36	8.46	0.120	0.490	26.60	5.10	<8.70	44.40	2530.	1490.	9800.	<0.87
A	77 11 04	112	03	2.20	7.30	0.098	0.410	25.20	10.00	<19.00	47.40	2900.	1530.	11200.	<1.90
A	77 11 04	113	03	2.19	6.90	0.075	0.320	34.80	18.40	<15.00	48.40	3010.	1640.	10700.	<1.50
A	77 11 04	114	03	2.40	10.12	0.190	0.830	31.20	7.20	<8.10	42.30	2280.	1730.	10200.	<0.81
A	77 11 04	115	03	2.20	8.20	0.150	0.670	22.50	6.80	<13.00	54.40	4050.	1760.	11100.	<1.30
A	77 11 04	116	03	2.38	9.190	0.200	0.890	28.20	7.80	<8.90	47.80	2460.	1410.	9270.	<0.89
A	77 11 04	117	03	4.53	12.45	0.150	0.670	50.30	5.70	<5.30	55.90	2670.	1640.	10300.	<0.53
A	77 11 04	118	03	2.30	8.86	0.150	0.670	37.10	8.00	<8.70	44.50	2350.	1510.	10700.	<0.87
A	77 11 04	119	03	2.20	6.81	0.081	0.330	34.90	7.50	<12.00	45.30	2010.	1170.	10100.	<1.20
A	77 11 04	120	03	2.24	7.69	0.110	0.450	45.30	7.70	<12.00	54.90	2400.	1410.	9950.	<1.20
A	77 11 04	121	03	2.69	8.61	0.120	0.510	31.90	6.00	<10.00	47.00	2370.	1110.	9450.	<1.00
Spiny dogfish, Squalus acanthias															
D	77 10 26	038	05 M	73.00	1350.00	0.640	2.400	5.10	12.50	<4.70	9.90	213.	708.	3500.	<0.47
D	77 10 26	039	05 M	77.50	1750.00	0.700	2.800	4.60	7.20	21.60	12.30	282.	809.	4020.	3.20
D	77 10 26	040	05 M	73.50	1550.00	0.470	2.000	5.40	7.20	<4.80	11.80	302.	911.	2550.	<0.48
D	77 10 26	041	05 M	80.00	1880.00	0.370	1.600	2.60	42.50	<4.90	27.80	379.	851.	5660.	<0.49
D	77 10 26	042	05 M	68.00	1180.00	0.380	1.700	3.20	10.80	<4.90	13.10	302.	931.	5280.	<0.49
D	77 10 26	043	05 F	78.50	1720.00	1.100	4.300	11.80	17.00	<4.80	10.40	706.	855.	3910.	<0.48
D	77 10 26	044	05 F	100.00	5050.00	1.200	4.600	11.50	7.00	<4.80	11.60	185.	755.	3710.	<0.48
D	77 10 26	045	05 F	96.00	4000.00	0.520	1.800	2.30	6.70	<4.80	10.50	182.	638.	3280.	<0.48
D	77 10 26	046	05 F	92.00	3600.00	0.790	2.700	12.40	7.70	<4.90	8.50	158.	617.	2450.	<0.48
D	77 10 26	047	05 F	107.00	5300.00	2.100	7.900	1.30	7.00	<4.70	10.60	192.	760.	3000.	<0.47
Pacific herring, Clupea harengus pallasi															
C	77 10 28	049	06	11.50	16.70	0.017	0.075	5.00	39.30	<7.60	57.90	3200.	1590.	3030.	<0.76
D	77 10 26	050	06	11.60	15.00	0.017	0.067	5.00	40.00	<12.00	33.20	2320.	1130.	4350.	<1.20
Northern anchovy, Engraulis mordax mordax															
D	77 10 26	048	21	13.10	25.50	0.035	0.130	2.30	31.20	<8.40	20.60	4490.	1050.	2030.	<0.84
Chinook salmon, Oncorhynchus tshawytscha															
B	77 05 01	264	07		7.25	0.065	0.190	4.10	19.70	<5.00	19.40	1290.	490.	1210.	<0.50
Copper rockfish, Sebastes caurinus															
C	77 12 01	236	19	37.40	850.00	0.400	1.800	7.70	13.40	<4.90	19.50	2020.	1310.	1310.	<0.49
C	77 12 01	237	19	33.30	530.00	0.260	1.200	3.70	12.70	15.40	20.30	4670.	1310.	1310.	<0.46
C	77 12 01	238	19	34.50	620.00	0.400	1.700	27.50	49.80	<4.90	19.00	1720.	1390.	1320.	<0.49
C	77 12 01	239	19	35.20	730.00	0.360	1.600	4.40	14.80	<4.90	14.10	837.	1290.	1030.	<0.49
Quillback rockfish, Sebastes maliger															
C	77 12 01	240	17	27.30	290.00	0.110	0.360	9.60	18.30	<4.80	17.10	7120.	1190.	1200.	<0.48
C	77 12 01	241	17	26.00	220.00	0.078	0.350	4.80	21.40	<4.90	21.90	2180.	1380.	1260.	<0.49
Kelp greenling, Hexagrammos decagrammus															
C	77 12 01	242	20 M	31.00	310.00	0.053	0.220	5.30	23.10	<4.60	26.70	5810.	1410.	2840.	<0.46
Lingcod, Ophiodon elongatus															
C	77 12 01	243	18 M	62.50	2200.00	0.160	0.410	4.10	7.20	<5.00	14.00	328.	865.	785.	<0.50

TABLE 7. (Continued)

SITE	DATE	SMP NO.	SP.S	LENGTH (cm)	WEIGHT (g)	TRACE METALS (ug/g) Hg wet	Hg dry	Cu dry	Fe dry	Pb dry	Zn dry	Cn dry	Mg dry	Mn dry	Cd dry
ZONE 6															
Prawn, Pandalus platyceros															
B	77 12 22	265	02 F	4.56	61.74	0.220	0.920	22.40	7.10	<4.90	52.40	705.	1450.	4520.	<0.49
B	77 12 22	266	02 F	3.95	36.84	0.200	0.920	17.80	12.30	<5.00	62.80	885.	1500.	6620.	<0.50
B	77 12 22	267	02 F	4.18	53.16	0.110	0.500	16.20	8.00	<4.90	53.10	793.	1520.	5260.	<0.49
B	77 12 22	268	02 F	4.30	49.43	0.210	0.880	22.40	6.80	<4.90	62.10	2300.	1560.	5170.	<0.49
B	77 12 22	269	02 F	4.59	60.73	0.270	1.100	21.10	8.30	<4.90	68.00	1140.	1600.	4830.	<0.49
B	77 12 22	270	02 F	4.59	55.67	0.150	0.660	20.00	10.10	<4.90	64.90	771.	1720.	5950.	<0.49
B	77 12 22	271	02 F	4.59	63.66	0.210	0.870	44.50	12.90	<4.80	68.30	1130.	1630.	5240.	<0.48
B	77 12 22	272	02 F	4.50	57.71	0.084	0.350	24.40	10.60	<4.90	72.30	841.	1620.	5110.	<0.49
B	77 12 22	273	02 F	4.43	57.34	0.220	0.920	19.20	7.30	<4.60	72.70	709.	1660.	4480.	<0.46
B	77 12 22	274	02 F	4.38	52.48	0.140	0.610	22.50	9.80	<4.90	84.50	945.	1680.	5220.	<0.49
Side-stripe shrimp, Pandalopsis dispar															
C	77 05 11	54T	04		6.20	0.066	0.296	34.90	65.40	<10.00	48.30	10400.	1840.	8970.	<1.00
C	77 05 11	55T	04		10.00	0.190	0.749	25.60	50.50	<9.50	49.00	3270.	1230.	7530.	<0.95
C	77 05 11	56T	04		15.80	0.095	0.431	20.60	118.00	<6.50	47.00	2890.	1340.	8320.	<0.65
C	77 05 11	57T	04		13.20	0.080	0.311	25.10	46.30	<55.60	45.40	3070.	1280.	6970.	<0.56
C	77 05 11	58T	04		23.50	0.208	0.996	17.60	53.90	<4.90	44.40	2450.	1300.	7790.	<0.49
C	77 05 11	61T	04		10.00	0.048	0.212	23.50	61.90	<7.80	48.50	6890.	1470.	7710.	<0.78
C	77 05 11	62T	04		16.00	0.124	0.541	18.00	27.40	<5.10	43.90	714.	1190.	6130.	<0.51
C	77 05 11	63T	04		13.00	0.091	0.387	18.80	47.60	<6.30	42.90	2480.	1240.	6550.	<0.63
C	77 05 11	64T	04		18.50	0.063	0.273	23.00	15.90	<4.80	42.50	1960.	1290.	7640.	<0.48
C	77 05 11	65T	04		21.50	0.067	0.292	22.30	35.50	<4.70	44.70	1250.	1280.	7770.	<0.47
Spiny pink shrimp, Pandalus borealis															
C	77 05 11	66T	03		4.70	0.104	0.391	13.60	15.20	<18.00	38.70	6490.	1240.	6890.	<1.80
C	77 05 11	67T	03		5.60	0.087	0.341	17.90	46.50	<19.00	42.50	5520.	1380.	9800.	<1.90
C	77 05 11	68T	03		4.40	0.095	0.365	20.20	51.40	<23.00	39.50	5980.	1280.	**	<2.30
C	77 05 11	69T	03		10.80	0.115	0.534	16.10	41.10	<8.60	41.30	1250.	1150.	8250.	<0.86
C	77 05 11	70T	03		10.00	0.144	0.615	9.70	53.00	<8.30	43.50	607.	1190.	7670.	<0.83
C	77 05 11	71T	03		10.00	0.155	0.703	14.80	27.70	<15.00	41.30	4120.	1270.	7630.	<1.50
C	77 05 11	72T	03		10.30	0.181	0.791	11.20	33.20	<11.00	41.50	1060.	1120.	9010.	<1.10
C	77 05 11	73T	03		10.60	0.166	0.678	18.50	14.50	<7.00	41.90	2300.	1230.	7360.	<0.70
C	77 05 11	74T	03		9.00	0.208	0.972	12.60	48.60	<9.20	44.90	879.	1170.	9410.	<0.92
C	77 05 11	75T	03		9.40	0.251	1.090	18.70	13.60	<8.40	43.90	3100.	1280.	7520.	<0.84
Spiny dogfish, Squalus acanthias															
D	77 06 08	01A	05 F	76.30		1.500	3.300								
D	77 06 08	02A	05 F	67.60		3.300	5.800								
D	77 06 08	05A	05 F	90.90		3.400	5.400								
D	77 06 08	06A	05 F	87.40		1.300	2.900								
D	77 06 08	10A	05 F	44.00		0.600	0.940								
D	77 06 08	12A	05 M	71.20		2.500	4.900								
D	77 06 08	14A	05 M	73.10		0.760	2.100								
D	77 06 08	15A	05 M	53.00		1.300	2.300								
D	77 06 08	16A	05 M	80.90		1.900	4.700								
D	77 06 08	17A	05 M	64.20		1.100	2.500								
Copper rockfish, Sebastes caurinus															
A	78 02 10	326	19	32.50	530.00	0.221	1.050	1.40	32.80	<4.80	16.00	1440.	1280.	7110.	<0.48
A	78 02 10	331	19	31.20	520.00	0.257	1.230	1.20	9.30	<4.70	13.60	1500.	1110.	5000.	<0.47

* Note: The wet:dry ratios for the mercury content of Squalus acanthias from zone 6 appear to be anomalous in comparison to other wet:dry ratio information for this species.

** Data not available.

TABLE 7. (Continued)

SITE	DATE	SMP NO.	SP.S	LENGTH (cm)	WEIGHT (g)	TRACE METALS (ug/g) Hg wet	Hg dry	Cu dry	Fe dry	Pb dry	Zn dry	Ca dry	Mg dry	Na dry	Cd dry
Splitnose rockfish, Sebastes diploproa															
C	77 05 11	53T	22	29.00	342.00	0.566	2.800	8.20	25.20	<4.90	12.90	843.	1060.	5660.	<0.49
Quillback rockfish, Sebastes maliger															
A	78 02 10	327	17	32.30	550.00	0.690	3.510	1.60	9.20	<4.80	18.30	1980.	1070.	5430.	<0.48
A	78 02 10	328	17	34.20	700.00	0.658	3.160	<0.97	9.30	<4.80	14.20	1230.	1000.	4290.	<0.48
A	78 02 10	329	17	31.40	550.00	0.331	1.590	<0.98	5.10	<4.90	14.50	1830.	1100.	4560.	<0.49
A	78 02 10	330	17	30.40	520.00	0.215	1.000	1.30	4.60	<4.80	14.30	920.	1110.	3710.	<0.48
Kelp greenling, Hexagrammos decagrammus															
A	78 02 10	332	20	40.20	730.00	0.419	2.590	1.40	17.90	<5.00	27.70	543.	1100.	6020.	<0.50
Lingcod, Ophiodon elongatus															
A	78 02 10	333	18	54.50	1700.00	0.136	0.678	2.80	7.60	<4.60	33.10	545.	1070.	4290.	<0.46
Dover sole, Microstomus pacificus															
C	77 05 11	59T	13	33.00	346.00	0.047	0.263	<0.98	5.90	<4.90	13.20	725.	794.	7090.	<0.49
C	77 05 11	60T	13	29.00	230.00	0.039	0.197	<0.99	8.00	<5.00	14.30	862.	766.	6090.	<0.50
ZONE 7															
Dungeness crab, Cancer magister															
C	77 10 25	027	01 M	16.50		0.041	0.220	39.80	23.20	<4.90	145.00	10700.	1790.	14600.	<0.49
E	77 11 21	209	01 M	17.00		0.042	0.190	24.20	28.80	<5.00	163.00	5000.	2720.	15000.	<0.50
E	77 11 21	210	01 M	16.60		0.079	0.350	24.30	23.80	<4.80	207.00	7800.	1360.	13000.	<0.48
E	77 11 21	211	01 M	16.60		0.086	0.390	57.90	77.60	<4.80	188.00	4300.	1440.	8480.	<0.48
C	77 11 21	282	01 M	16.50		0.134	0.598	26.30	35.70	<4.70	205.00	2020.	1270.	7300.	<0.47
C	77 11 21	283	01 M	17.00		0.174	0.745	24.50	64.80	<4.70	208.00	2160.	1240.	7780.	<0.47
C	77 11 21	284	01 M	17.00		0.196	0.990	26.20	86.70	<4.80	237.00	4820.	1470.	11000.	<0.48
E	77 11 21	308	01 M	17.40		0.082	0.420	25.10	13.60	<4.90	168.00	1190.	1280.	11600.	<0.49
E	77 11 21	309	01 M	16.90		0.084	0.375	49.20	22.00	<4.70	187.00	960.	1210.	8660.	<0.47
E	77 11 21	310	01 M	17.70		0.059	0.302	15.40	19.30	<4.90	186.00	3610.	1400.	11000.	<0.49
E	77 11 21	311	01 M	17.00		0.071	0.316	25.90	16.90	<4.80	178.00	888.	1230.	8320.	<0.48
Prawn, Pandalus platyceros															
G	77 11 03	058	02	4.72	63.57	0.150	0.690	33.30	12.30	<4.90	58.00	1980.	1880.	11600.	<0.49
G	77 11 03	059	02	4.37	62.83	0.140	0.620	36.30	12.20	<5.00	57.80	1780.	1800.	10300.	<0.50
G	77 11 03	060	02	4.57	60.20	0.200	0.670	27.20	28.80	<4.90	46.50	1600.	1580.	10100.	<0.48
G	77 11 03	061	02 F	4.89	72.20	0.220	0.960	33.90	10.80	<4.70	54.50	1680.	1790.	12000.	<0.47
G	77 11 03	062	02	4.95	75.10	0.140	0.640	61.30	15.40	<4.90	56.20	1690.	1790.	11600.	<0.49
G	77 11 03	063	02	4.84	72.28	0.190	0.830	37.50	11.10	<4.80	55.70	1730.	1730.	10600.	<0.48
G	77 11 03	064	02 F	4.54	61.99	0.180	0.770	27.70	7.80	<4.90	51.80	1630.	1750.	11800.	<0.49
G	77 11 03	065	02	4.66	70.10	0.260	0.940	27.30	9.20	<4.80	55.70	1490.	1780.	8190.	<0.48
G	77 11 03	066	02 F	4.59	63.88	0.085	0.340	30.90	9.50	<4.90	50.90	1570.	1600.	9970.	<0.49
G	77 11 03	067	02 F	4.65	64.69	0.065	0.300	32.00	6.70	<4.90	52.60	1850.	1840.	12500.	<0.49
G	77 11 03	068	02	4.80	69.38	0.190	0.870	36.50	9.80	<5.00	55.00	1850.	1860.	10900.	<0.50
G	77 11 03	069	02	4.59	64.06	0.073	0.320	33.80	10.00	<4.70	54.30	1720.	1820.	10000.	<0.47
G	77 11 03	070	02	4.51	59.79	0.810	3.600	6.30	8.20	<4.70	15.30	1570.	2120.	8490.	<0.47
G	77 11 03	071	02	4.64	75.02	0.340	1.100	46.60	14.00	<4.90	54.60	2080.	1870.	12100.	<0.49
G	77 11 03	072	02 F	4.83	80.87	0.260	0.770	29.50	7.00	<4.80	38.20	1260.	1260.	8550.	<0.48
G	77 11 03	073	02	4.57	65.86	0.140	0.620	37.80	11.10	<4.90	54.10	2170.	1820.	11200.	<0.49
G	77 11 03	074	02 F	4.83	77.13	0.370	1.500	33.30	10.60	<4.90	52.50	1930.	1670.	10300.	<0.49
G	77 11 03	075	02 F	4.58	71.80	0.240	0.880	34.30	9.50	<4.90	45.10	1510.	1540.	10700.	<0.49
G	77 11 03	076	02	4.99	68.05	0.240	0.990	36.10	7.90	<4.80	50.50	2070.	1560.	12800.	<0.48
G	77 11 03	077	02	4.86	74.13	0.300	1.100	37.30	17.80	<4.80	103.00	1480.	1430.	8480.	<0.48
G	77 11 03	078	02 F	4.65	65.16	0.120	0.380	34.40	8.50	<5.00	44.20	1420.	1250.	8870.	<0.50

TABLE 7. (Continued)

SITE	DATE	SMP NO.	SP.S	LENGTH (cm)	WEIGHT (g)	TRACE METALS (ug/g) Hg wet	Hg dry	Cu dry	Fe dry	Pb dry	Zn dry	Ca dry	Mg dry	Na dry	Cd dry
D	77 11 03	079	02 F	4.59	71.09	0.330	1.200	32.40	11.00	<4.70	55.50	1580.	1690.	11100.	<0.47
D	77 11 03	080	02 F	4.28	55.15	0.120	0.520	41.70	9.20	<4.90	53.50	1650.	1600.	11300.	<0.49
D	77 11 03	081	02 F	4.31	58.00	0.160	0.550	38.50	13.30	<4.80	43.00	1610.	1420.	9760.	<0.48
D	77 11 03	082	02 F	4.36	55.38	0.130	0.600	23.00	10.80	<4.70	49.40	2110.	1890.	11200.	<0.47
D	77 11 03	083	02	3.76	36.67	0.160	0.680	47.90	9.40	<5.00	52.50	1570.	1530.	11400.	<0.50
D	77 11 03	084	02 F	4.31	58.63	0.170	0.700	41.50	11.70	<5.00	52.50	1980.	1630.	10500.	<0.50
D	77 11 03	085	02 F	4.45	61.53	0.270	1.200	31.70	14.30	<4.90	50.50	1810.	1650.	10700.	<0.49
D	77 11 03	086	02 F	4.32	55.77	0.150	0.720	39.90	12.20	<4.70	53.00	1940.	1640.	11300.	<0.47
D	77 11 03	087	02 F	4.34	58.09	0.130	0.590	38.40	9.90	<4.90	55.00	1950.	1780.	13000.	<0.49
D	77 11 03	088	02 F	4.36	58.23	0.170	0.630	28.90	18.60	<4.90	46.70	1640.	1550.	9950.	<0.49
B	77 12 16	254	02	3.58	27.56	0.095	0.460	27.30	24.70	<4.90	60.50	2410.	1750.	10000.	<0.49
B	77 12 16	255	02 F	4.31	56.03	0.180	0.760	28.60	7.20	<4.90	55.70	1620.	1640.	7040.	<0.49
B	77 12 16	256	02 F	3.67	28.84	0.120	0.530	27.60	7.80	<5.00	54.20	1040.	1530.	6770.	<0.50
B	77 12 16	257	02	3.69	27.76	0.082	0.390	21.50	18.40	<4.60	53.80	1340.	1582.	8780.	<0.46
B	77 12 16	258	02	3.31	23.58	0.210	0.970	46.50	16.00	<5.00	54.50	1490.	1640.	8850.	<0.50
B	77 12 16	259	02	3.42	26.68	0.110	0.500	19.20	7.80	<4.90	53.90	1150.	1580.	6560.	<0.49
B	77 12 16	260	02	3.27	23.68	0.075	0.310	33.70	10.10	<4.80	58.80	1150.	1610.	7120.	<0.48
B	77 12 16	261	02	3.32	24.16	0.150	0.680	26.50	9.50	<4.60	53.80	1200.	1590.	7840.	<0.46
B	77 12 16	262	02	3.22	21.59	0.081	0.390	24.60	10.30	<5.00	56.20	1370.	1660.	9140.	<0.50
B	77 12 16	263	02	3.47	24.19	0.180	0.880	20.80	9.50	<4.90	55.90	1330.	1640.	8060.	<0.49
Spiny dogfish, Squalus acanthias															
C	77 10 25	017	05 F	101.00	5150.00	0.980	3.700	3.90	8.00	<4.60	13.90	245.	673.	3500.	<0.46
C	77 10 25	018	05 F	103.00	5300.00	0.830	2.700	3.10	15.30	<4.70	10.30	169.	521.	2690.	<0.47
C	77 10 25	019	05 F	108.50	5550.00	2.400	9.700	17.90	22.00	<4.90	18.10	326.	814.	4100.	<0.49
C	77 10 25	020	05 F	95.00	4050.00	1.200	4.500	2.90	6.00	<4.80	11.00	242.	741.	2890.	<0.48
C	77 10 25	021	05 F	82.00	2000.00	0.850	3.800	3.60	70.30	<4.90	40.20	363.	851.	3890.	<0.49
C	77 10 25	022	05 M	84.00	2400.00	0.640	2.700	7.90	9.80	<4.80	12.50	300.	880.	2650.	<0.48
C	77 10 25	023	05 M	79.00	1700.00	0.790	3.600	7.60	8.80	<4.90	14.10	336.	886.	4900.	<0.48
C	77 10 25	024	05 M	80.50	1800.00	0.590	2.500	8.30	15.50	<5.00	14.80	416.	825.	5300.	<0.50
C	77 10 25	025	05 M	77.50	1700.00	0.850	3.700	2.00	9.80	<4.60	13.40	501.	923.	4730.	<0.46
F	77 10 25	323	05 M	61.30	850.00	0.154	0.735	1.10	10.70	<4.70	13.80	304.	1120.	6610.	<0.47
Chum salmon, Oncorhynchus keta															
C	77 10 25	028	23 M	77.50	5500.00	0.032	0.100	11.90	388.00	<4.80	11.30	332.	1000.	1890.	<0.48
Striped seaperch, Embiotoca lateralis															
C	77 11 22	218	24	22.80	243.00	0.089	0.400	2.50	13.60	<4.80	32.00	4790.	1480.	1810.	<0.48
C	77 11 22	219	24	22.80	260.00	0.071	0.320	1.20	51.20	<5.00	17.40	1710.	1570.	2340.	<0.50
C	77 11 22	220	24	22.70	230.00	0.066	0.290	1.20	17.50	<5.00	28.80	1220.	1560.	2430.	3.10
C	77 11 22	221	24	20.00	182.00	0.052	0.230	1.70	9.20	<4.80	25.10	718.	1680.	1380.	<0.48
C	77 11 22	222	24	16.70	88.00	0.033	0.150	3.70	8.20	<4.70	23.10	796.	1610.	1420.	<0.47
C	77 11 22	281	24	24.90	190.00	0.140	0.645	2.80	13.00	<5.00	23.80	2970.	1260.	1550.	<0.50
Copper rockfish, Sebastes caurinus															
C	78 01 25	275	19	37.00	680.00	0.638	2.960	<0.99	9.30	<4.90	14.20	512.	1130.	1340.	<0.49
C	78 01 25	276	19	32.50	490.00	0.351	1.740	<0.97	62.20	<4.90	17.50	1950.	1260.	3420.	<0.49
C	78 01 25	277	19	33.20	410.00	0.793	3.860	4.90	5.20	<4.70	16.10	2030.	1150.	1350.	<0.47
C	78 01 25	278	19	29.30	290.00	0.269	1.350	7.30	20.20	<5.00	18.10	894.	1140.	1580.	<0.50
C	78 01 25	279	19	34.60	550.00	0.303	1.390	3.60	13.40	<4.70	15.00	1130.	1090.	1530.	<0.47
Quillback rockfish, Sebastes maliger															
A	77 11 22	213	17	32.50	826.00	0.350	1.500	0.98	10.00	<4.80	19.40	1740.	1300.	1320.	<0.48
A	77 11 22	214	17	28.10	417.00	0.110	0.480	2.20	3.90	<4.90	13.40	860.	1320.	1160.	<0.49
A	77 11 22	215	17	25.70	315.00	0.110	0.480	3.30	8.30	<5.90	18.20	761.	1370.	1230.	<0.59
A	77 11 22	216	17	28.20	421.00	0.085	0.380	4.80	14.80	<4.60	13.90	1750.	1300.	1180.	<0.46
A	77 11 22	217	17	24.40	258.00	0.075	0.340	1.20	6.90	<5.00	16.70	1950.	1270.	1380.	<0.50

TABLE 7. (Continued)

SITE	DATE	SMP NO.	SP.S	LENGTH (cm)	WEIGHT (g)	TRACE METALS (ug/g) Hg wet	Hg dry	Cu dry	Fe dry	Pb dry	Zn dry	Co dry	Mg dry	Na dry	Cd dry
Black rockfish, Sebastes melanops															
C	78 01 25	280	25	35.00	600.00	0.083	0.346	9.10	12.40	<4.60	15.10	611.	1140.	1120.	<0.46
Starry flounder, Platichthys stellatus															
E	77 11 21	212	26	29.30	341.00	0.043	0.180	2.10	8.20	<4.60	21.90	1700.	1130.	1110.	<0.46
ZONE B															
Dungeness crab, Cancer magister															
A	77 10 25	011	01 M	17.70		0.037	0.190	16.40	35.40	<5.00	258.00	1530.	1380.	15400.	0.63
A	77 10 25	012	01 M	16.40		0.170	0.740	38.30	25.70	<4.80	167.00	5950.	1490.	7200.	<0.48
A	77 10 25	013	01 M	17.30		0.021	0.130	35.50	38.00	<4.90	175.00	3680.	1620.	23400.	<0.49
A	77 10 25	014	01 M	17.60		0.042	0.180	41.50	16.20	<4.60	163.00	3770.	1400.	6870.	<0.46
A	77 10 25	015	01 M	17.00		0.030	0.170	37.50	28.60	<4.60	157.00	2470.	1630.	19200.	<0.46
A	77 10 25	016	01 M	17.50		0.043	0.250	27.40	22.60	<4.70	184.00	1240.	1390.	16700.	<0.47
A	78 01 27	304	01 M	17.00		0.290	1.410	26.50	37.60	<4.70	184.00	4550.	1340.	11400.	<0.47
A	78 01 27	305	01 M	16.50		0.105	0.454	30.00	15.80	<4.80	158.00	2560.	1330.	8300.	<0.48
A	78 01 27	306	01 M	17.60		0.125	0.600	41.10	58.80	<5.00	311.00	4990.	1590.	11500.	<0.50
A	78 01 27	307	01 M	18.10		0.051	0.233	28.10	31.50	<4.60	168.00	2100.	1250.	8670.	<0.46
Prawn, Pandalus platyceros															
D	77 11 03	089	02 F	4.29	56.39	0.130	0.590	35.30	8.50	<4.90	57.00	1380.	1640.	9750.	<0.49
D	77 11 03	090	02 F	4.56	74.05	0.380	1.800	42.80	29.10	<4.90	59.00	2050.	1900.	11400.	<0.49
D	77 11 03	091	02 F	4.32	60.32	0.130	0.580	34.60	8.70	<4.80	52.50	1840.	1800.	11300.	<0.48
D	77 11 03	092	02 F	4.29	60.04	0.170	0.790	41.60	9.60	<4.80	57.00	2040.	1960.	14000.	<0.48
D	77 11 03	093	02 F	4.30	57.25	0.160	0.550	26.60	6.10	<4.80	42.60	1240.	1440.	9230.	<0.48
D	77 11 03	094	02	3.70	32.81	0.110	0.460	44.60	8.70	<5.00	51.50	1390.	1460.	9040.	<0.50
D	77 11 03	095	02 F	4.45	59.73	0.120	0.550	32.10	9.40	<5.00	48.30	1560.	1460.	10800.	<0.50
D	77 11 03	096	02 F	4.80	71.47	0.180	0.870	42.40	12.60	<4.60	59.80	2030.	1820.	17100.	<0.46
D	77 11 03	097	02 F	4.38	59.57	0.140	0.480	33.60	7.60	<4.90	51.50	2050.	1640.	14000.	<0.49
D	77 11 03	098	02 F	4.43	65.59	0.140	0.590	37.90	10.80	<4.60	49.50	1430.	1690.	11400.	<0.46
Spiny pink shrimp, Pandalus borealis															
D	77 11 03	099	03	1.88	4.84	0.043	0.200	80.80	39.20	<33.00	68.00	2080.	1580.	16300.	<3.30
D	77 11 03	244	03	1.97	5.90	0.120	0.560	24.10	10.00	<18.00	44.40	1680.	1630.	9130.	<1.80
D	77 11 03	245	03	2.04	6.29	0.150	0.620	40.60	9.20	<16.00	55.00	1960.	1750.	9590.	<1.60
D	77 11 03	246	03	2.00	6.36	0.093	0.420	33.80	12.40	<16.00	53.80	1940.	1750.	11900.	<1.60
D	77 11 03	247	03	1.97	5.95	0.073	0.330	29.10	30.20	<22.00	50.60	1810.	1630.	8980.	<2.20
D	77 11 03	248	03	1.95	5.06	0.083	0.370	30.20	20.90	<26.00	46.60	1610.	1820.	8750.	<2.60
D	77 11 03	249	03	2.06	6.72	0.081	0.370	23.90	11.10	<19.00	49.60	2660.	2520.	6290.	<1.90
D	77 11 03	250	03	1.98	6.20	0.069	0.310	47.30	33.80	<18.00	58.80	1700.	1690.	11650.	<1.80
D	77 11 03	251	03	2.03	5.67	0.074	0.340	24.50	10.20	<20.00	45.90	1500.	1670.	9230.	<2.00
D	77 11 03	252	03	2.15	6.87	0.110	0.470	24.40	9.30	<14.00	46.30	1490.	1580.	9000.	<1.40
D	77 11 03	253	03	1.94	5.66	0.093	0.420	35.00	21.30	<20.00	46.90	1560.	1680.	11100.	<2.00
Spiny dogfish, Squalus acanthias															
B	77 10 25	001	05 M	70.50	1250.00	0.370	1.100	7.20	7.00	<4.90	11.10	220.	715.	3090.	<0.49
B	77 10 25	002	05 M	74.00	1550.00	1.100	4.200	4.40	10.20	<4.70	10.70	298.	785.	4750.	<0.47
B	77 10 25	003	05 M	77.50	1750.00	0.630	2.600	5.90	7.10	<4.80	11.90	2790.	897.	5270.	<0.48
B	77 10 25	004	05 M	74.00	1550.00	0.920	3.800	16.20	12.00	<4.60	11.30	278.	914.	3480.	<0.46
B	77 10 25	005	05 M	72.00	1500.00	0.530	1.900	10.20	10.10	<4.60	13.20	314.	851.	3840.	<0.46
B	77 10 25	006	05 F	102.00	5300.00	1.900	6.600	13.40	8.30	<4.90	10.00	206.	667.	3450.	<0.49
B	77 10 25	007	05 F	100.00	5100.00	1.200	3.900	10.00	5.50	<4.80	10.30	210.	624.	3540.	<0.48
B	77 10 25	008	05 F	78.00	1600.00	0.780	3.300	4.30	9.20	<5.00	12.40	409.	849.	4420.	<0.50
B	77 10 25	009	05 F	70.50	1300.00	0.560	2.300	12.70	10.00	<5.00	12.90	464.	867.	5500.	<0.50
B	77 10 25	010	05 F	85.50	2250.00	1.200	5.000	2.90	12.40	<4.80	14.10	345.	846.	4690.	<0.48

TABLE 7. (Continued)

SITE	DATE	SMP NO.	SP.	S	LENGTH (cm)	WEIGHT (g)	TRACE METALS (ug/g) Hg wet	Hg dry	Cu dry	Fe dry	Pb dry	Zn dry	Ca dry	Mg dry	Na dry	Cd dry
Copper rockfish, *Sebastes caurinus*																
C	78 02 15	312	19		35.70	750.00	0.440	2.070	1.20	6.30	<4.60	17.70	2040.	999.	1920.	<0.46
C	78 02 15	313	19		31.90	495.00	0.204	0.954	2.50	13.80	<4.80	23.00	2530.	1150.	2200.	<0.48
C	78 02 15	314	19		27.70	280.00	0.107	0.507	2.00	5.10	<4.90	14.90	1690.	1160.	1470.	<0.49
C	78 02 15	315	19		33.50	520.00	0.290	1.430	5.30	8.20	<5.00	18.00	1340.	1130.	1940.	<0.50
C	78 02 15	316	19		32.00	420.00	0.104	0.490	1.90	4.60	<4.70	14.70	1500.	1140.	1600.	<0.47
Quillback rockfish, *Sebastes maliger*																
C	78 02 15	317	17		31.90	600.00	0.249	1.190	7.50	12.40	<4.80	14.10	548.	1140.	1890.	<0.48
Kelp greenling, *Hexagrammos decagrammus*																
C	78 02 15	321	20	M	40.50	800.00	0.718	3.570	1.90	25.80	<4.90	28.90	1460.	1180.	2110.	<0.49
C	78 02 15	322	20	M	32.40	375.00	0.067	0.324	<0.94	6.40	<4.70	23.60	1470.	1190.	1580.	<0.47
Lingcod, *Ophiodon elongatus*																
C	78 02 15	318	18	M	60.90	2100.00	0.149	0.704	2.80	6.70	<4.90	25.60	452.	1120.	1780.	<0.48
C	78 02 15	319	18	M	58.70	1970.00	0.187	0.890	5.60	6.00	<4.90	19.90	935.	1140.	1670.	<0.49
C	78 02 15	320	18	M	49.70	1210.00	0.114	0.533	9.10	5.80	<4.80	21.70	418.	1140.	1610.	<0.48

SMP NO. - sample number
SP. - species
S - sex

Ni dry	Mn dry	Al dry	Ba dry	Co dry	Cr dry	Mo dry	Sb dry	Sr dry	Ti dry	V dry	As dry	Se dry	P dry	WET:DRY RATIO
<9.70	1.12	33.00	0.60	<0.97	<0.97	<9.70	<4.90	37.40	1.56	<1.50	14.00	<4.90	15300.	5.25
<9.80	2.28	55.00	1.24	<0.98	<0.98	<9.80	<4.90	104.00	2.45	<1.50	25.00	<4.90	15400.	5.80
<10.00	1.02	16.00	0.62	<1.00	<1.00	<10.00	<5.00	47.90	<1.00	<1.50	11.00	<5.00	15400.	4.85
<9.80	0.78	20.00	0.37	<0.98	<0.98	<9.80	<4.90	24.00	<0.98	<1.50	11.00	<4.90	13000.	4.77
<9.80	1.06	32.00	0.51	<0.98	<0.98	<9.80	<4.90	32.10	<1.43	<1.50	11.00	<4.90	13300.	4.92
<9.40	1.21	21.00	0.78	<0.94	<0.94	<9.40	<4.70	80.50	1.04	<1.40	15.00	<4.70	14000.	4.95
<9.40	2.01	23.00	1.60	<0.94	<0.94	<9.40	<4.70	179.00	1.00	<1.40	16.00	<4.70	4620.	4.81
<9.90	1.87	30.00	1.07	<0.99	<0.99	<9.90	<4.90	103.00	1.20	<1.50	22.00	<4.90	15000.	4.62
<9.80	1.77	33.00	1.25	<0.98	<0.98	<9.80	<4.90	159.00	1.26	<1.50	14.00	<4.90	13900.	4.57
<9.50	1.69	25.00	1.19	<0.95	<0.95	<9.50	<4.80	161.00	<0.95	<1.40	25.00	<4.80	14000.	5.07
<9.50	0.88	<14.00	0.16	<0.95	<0.95	<9.50	<4.80	34.40	<0.95	<1.40	17.00	<4.80	7480.	4.51
<9.60	0.70	<14.00	<0.14	<0.96	<0.96	<9.60	<4.80	25.20	<0.96	<1.40	23.00	<4.80	10300.	4.78
<9.90	0.87	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	36.90	<0.99	<1.50	23.00	<5.00	9880.	4.61
<13.00	1.30	<20.00	0.26	<1.30	<1.30	<13.00	<6.60	52.50	<1.30	<2.00	13.00	<6.60	8040.	4.81
<9.90	0.79	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	37.80	<0.99	<1.50	21.00	<5.00	8630.	5.30
<13.00	1.04	<20.00	<0.20	<1.30	<1.30	<13.00	<6.50	38.70	<1.30	<2.00	13.00	<6.50	8030.	4.58
<10.00	1.10	<16.00	<0.16	<1.00	<1.00	<10.00	<5.20	19.10	<1.00	<1.60	10.00	<5.20	8790.	4.46
<9.90	1.03	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	69.80	<0.99	<1.50	31.00	<5.00	8890.	4.98
<9.60	0.85	<14.00	0.14	<0.96	<0.96	<9.60	<4.80	40.80	<0.96	<1.40	29.00	<4.80	10500.	4.77
<9.90	0.97	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	66.60	<0.99	<1.50	13.00	<4.90	9010.	4.68
<9.80	0.33	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	0.30	<0.98	<1.50	14.00	<4.90	8780.	3.60
<9.40	0.41	<14.00	<0.14	<0.94	<0.94	<9.40	<4.70	0.54	<0.94	<1.40	<9.40	<4.70	10500.	4.54
<9.60	0.67	<14.00	<0.14	<0.96	<0.96	<9.60	<4.80	0.59	<0.96	<1.40	30.00	<4.80	10600.	4.25
<9.60	0.39	<14.00	<0.14	<0.96	<0.96	<9.60	<4.80	0.38	<0.96	<1.40	<9.60	<4.80	8010.	3.91
<9.60	0.53	<15.00	<0.15	<0.96	<0.96	<9.60	<4.80	0.51	<0.96	<1.50	44.00	<4.80	9480.	4.53
<9.10	0.43	<14.00	<0.14	<0.91	<0.91	<9.10	<4.60	1.30	<0.91	<1.40	<9.10	<4.60	8890.	4.28
<9.40	0.41	<14.00	<0.14	<0.94	<0.94	<9.40	<4.70	0.35	<0.94	<1.40	26.00	<4.70	8430.	4.47
<9.70	0.46	<15.00	<0.15	<0.97	<0.97	<9.70	<4.80	0.58	<0.97	<1.50	<9.70	<4.80	8150.	4.21
<9.40	0.52	<14.00	<0.14	<0.94	<0.94	<9.40	<4.70	0.58	1.10	<1.40	<9.40	<4.70	6860.	3.76
<9.20	0.23	<14.00	<0.14	<0.92	<0.92	<9.20	<4.60	0.31	<0.92	<1.40	<9.20	<4.60	6210.	3.61
<9.80	1.03	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	2.80	<0.98	<1.50	<9.80	<4.90	8440.	3.27
<9.40	0.65	<14.00	<0.14	<0.94	<0.94	<9.40	<4.70	6.85	<0.94	<1.40	12.00	<4.70	13900.	4.84
<11.00	1.50	<17.00	<0.17	<1.10	<1.10	<11.00	<5.70	19.70	<1.10	<1.70	<11.00	<5.70	12600.	4.10
<9.90	1.98	59.00	0.95	<0.99	<0.99	<9.90	<5.00	57.90	2.34	<1.50	22.00	<5.00	15400.	5.59
<9.90	3.35	93.00	1.95	<0.99	<0.99	<9.90	<5.00	119.00	4.04	<1.50	22.00	<5.00	15800.	6.10
<9.90	4.41	84.00	2.14	<0.99	<0.99	<9.90	<5.00	135.00	3.44	<1.50	37.00	<5.00	18900.	5.96
<9.80	3.94	107.00	1.84	<0.98	<0.98	<9.80	<4.90	119.00	4.47	<1.50	23.00	<4.90	15000.	4.82
<9.90	2.26	90.00	1.25	<0.99	<0.99	<9.90	<4.90	83.10	3.70	<1.50	24.00	<4.90	13700.	5.64

Ni dry	Mn dry	Al dry	Ba dry	Co dry	Cr dry	Mo dry	Sb dry	Sr dry	Ti dry	V dry	As dry	Se dry	P dry	WET:DRY RATIO
<9.90	1.84	65.00	0.77	<0.99	<0.99	<9.90	<5.00	45.60	2.51	<1.50	14.00	<5.00	12900.	5.41
<9.60	1.40	15.00	0.51	<0.96	<0.96	<9.60	<4.80	169.00	<0.96	<1.50	13.00	<4.80	6500.	4.87
<9.60	2.38	69.00	1.32	<0.96	<0.96	<9.60	<4.80	68.00	2.72	<1.40	15.00	<4.80	12500.	6.10
<9.40	2.17	64.00	1.19	<0.94	<0.94	<9.40	<4.70	93.90	2.78	<1.40	12.00	<4.70	13300.	5.01
<9.80	1.76	45.00	0.82	<0.98	<1.03	<9.80	<4.90	43.90	<0.98	<1.50	11.00	<4.90	12200.	4.33
<9.90	0.75	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	21.20	<0.99	<1.50	36.00	<4.90	10400.	4.08
<9.80	0.81	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	22.10	<0.98	<1.50	28.00	<4.90	10700.	4.45
<9.80	0.58	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	11.40	<0.98	<1.50	60.00	<4.90	7660.	3.11
<9.70	0.92	<15.00	<0.15	<0.97	<0.97	<9.70	<4.80	58.90	<0.97	<1.50	101.00	<4.80	8980.	5.02
<10.00	0.72	<15.00	<0.15	<1.00	<1.00	<10.00	<5.00	30.50	<1.00	<1.50	17.00	<5.00	9680.	4.53
<8.70	0.75	<13.00	<0.13	<0.87	<0.87	<8.70	<4.40	27.60	<0.87	<1.30	12.00	<4.40	6850.	4.42
<9.90	0.74	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	24.60	<0.99	<1.50	26.00	<4.90	8130.	4.50
<9.60	0.54	<14.00	<0.14	<0.96	<0.96	<9.60	<4.80	16.70	<0.96	<1.40	43.00	<4.80	6860.	3.19
<9.90	0.73	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	26.60	<0.99	<1.50	26.00	<5.00	9240.	4.28
<9.80	1.14	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	32.90	<0.98	<1.50	74.00	<4.90	9260.	5.19
<9.80	0.37	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	0.32	<0.98	<1.50	19.00	<4.90	8120.	4.06
<9.70	0.51	<15.00	<0.15	<0.97	<0.97	<9.70	<4.90	0.65	<0.97	<1.50	14.00	<4.90	9210.	4.29
<9.80	0.52	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	0.64	<0.98	<1.50	42.00	<4.90	10000.	4.74
<9.40	0.50	<14.00	<0.14	<0.94	<0.94	<9.40	<4.70	0.60	<0.94	<1.40	42.00	<4.70	9810.	4.74
<9.80	0.48	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	0.54	<0.98	<1.50	12.00	<4.90	8950.	4.30
<9.30	0.47	<14.00	0.17	<0.93	<0.93	<9.30	<4.70	0.66	<0.93	<1.40	14.00	<4.70	7600.	3.84
<9.40	0.39	<14.00	0.21	<0.94	<0.94	<9.40	<4.70	0.72	<0.94	<1.40	<9.40	<4.70	7310.	3.82
<9.90	0.58	<15.00	0.16	<0.99	<0.99	<9.90	<5.00	0.68	<0.99	<1.50	16.00	<5.00	9820.	4.51
<9.30	0.45	<14.00	<0.14	<0.93	<0.93	<9.30	<4.70	0.67	<0.93	<1.40	14.00	<4.70	8700.	4.42
<9.60	0.24	<14.00	<0.14	<0.96	<0.96	<9.60	<4.80	0.69	<0.96	<1.40	<9.60	<4.80	6280.	3.35
<13.00	0.64	<13.00	<0.19	<1.30	<1.30	<13.00	<6.50	3.20	<0.65	<1.90	87.00	<6.50	7900.	5.30
<21.00	0.83	<21.00	<0.32	<2.10	<2.10	<21.00	<11.00	7.42	<1.10	<3.20	<21.00	<11.00	9200.	5.00
<29.00	0.80	<29.00	<0.44	<2.90	<2.90	<29.00	<15.00	10.10	<1.50	<4.40	<29.00	<15.00	9430.	5.91
<21.00	1.40	<21.00	<0.32	<2.10	<2.10	<21.00	<11.00	3.72	<1.20	<3.20	<21.00	<11.00	9460.	5.69
<13.00	0.67	<13.00	<0.19	<1.30	<1.30	<13.00	<6.20	2.50	<0.62	<1.90	19.00	<6.20	8030.	4.79
<16.00	0.53	<16.00	<0.23	<1.60	<1.60	<16.00	<7.80	2.60	<0.78	<2.30	22.00	<7.80	7730.	4.81
<11.00	3.26	<11.00	0.23	<1.10	<1.10	<11.00	<5.70	14.90	<0.57	<1.70	14.00	<5.70	9280.	4.30
<32.00	1.65	62.00	0.79	<3.20	<3.20	<32.00	<16.00	19.70	3.10	<4.80	<32.00	<16.00	8490.	5.44
<46.00	2.10	53.00	0.94	<4.60	<4.60	<46.00	<23.00	59.60	3.00	<6.70	<46.00	<23.00	12800.	5.21
<9.80	0.44	<9.80	<0.15	<0.98	<0.98	<9.90	<4.98	2.58	<0.49	<1.50	37.00	<4.90	8640.	5.18
<19.00	1.57	<19.00	<0.28	<1.90	<1.90	<19.00	<9.50	20.90	<0.95	<2.80	19.00	<9.50	10900.	4.29
<11.00	1.16	<11.00	0.17	<1.10	<1.10	<11.00	<5.40	12.60	<0.54	<1.60	<18.00	<5.40	9850.	4.59
<9.70	1.00	<9.70	<0.15	<0.97	<0.97	<9.70	<4.90	14.10	<0.49	<1.50	26.00	<4.90	9190.	4.69
<12.00	0.97	<12.00	<0.18	<1.20	<1.20	<12.00	<5.90	8.30	<0.59	<1.80	<12.00	<5.90	8420.	4.70

Ni dry	Mn dry	Al dry	Ba dry	Co dry	Cr dry	Mo dry	Sb dry	Sr dry	Ti dry	V dry	As dry	Se dry	P dry	WET:DRY RATIO
<9.80	2.03	<9.80	0.32	<0.98	<0.98	<9.80	<4.90	51.50	<0.49	<1.50	14.00	<4.90	11600.	4.48
<9.40	2.20	<9.40	0.29	<0.94	<0.94	<9.40	<4.70	26.80	<0.47	<1.40	10.00	<4.70	10500.	4.27
<12.00	1.02	<12.00	<0.18	<1.20	<1.20	<12.00	<5.90	16.70	<0.59	<1.80	27.00	<5.90	9650.	4.85
<9.30	0.91	<9.30	<0.14	<0.93	<0.93	<9.30	<4.60	10.90	<0.46	<1.40	18.00	<4.60	9460.	4.49
<9.40	0.75	<9.40	0.16	<0.94	<0.94	<9.40	<4.70	7.90	<0.47	<1.40	16.00	<4.70	9850.	5.09
<12.00	0.29	<12.00	<0.19	<1.20	<1.20	<12.00	<6.20	2.20	<0.62	<1.90	<12.00	<6.20	9010.	4.97
<9.90	0.29	<9.90	<0.15	<0.99	<0.99	<9.90	<5.00	1.40	<0.50	<1.50	16.00	<5.00	9110.	2.76
<9.80	1.50	<36.00	0.91	<0.98	<0.98	<9.80	<4.90	43.40	1.45	<1.50	11.00	<4.90	13200.	4.77
<8.30	0.98	<13.00	0.68	<0.83	<0.83	<8.30	<4.20	119.00	<0.83	<1.30	<8.30	<4.20	11700.	4.18
<9.90	0.63	<15.00	0.48	<0.99	<0.99	<9.90	<5.00	17.30	<0.99	<1.50	<9.90	<5.00	12000.	4.36
<9.80	0.97	<15.00	0.92	<0.98	<0.98	<9.80	<4.90	58.50	<0.98	<1.50	23.00	<4.90	12300.	5.12
<10.00	1.15	<15.00	0.42	<1.00	<1.00	<10.00	<5.00	32.70	1.28	<1.50	<10.00	<5.00	12000.	5.21
<9.80	1.10	<15.00	0.61	<0.98	<0.98	<9.80	<4.90	39.20	1.07	<1.50	19.00	<4.90	13500.	4.86
<9.90	1.26	<15.00	0.92	<0.99	<0.99	<9.90	<4.90	114.00	<0.99	<1.50	12.00	<4.90	12300.	4.41
<9.80	1.09	<15.00	1.47	<0.98	<0.98	<9.80	<4.90	27.90	1.20	<1.50	20.00	<4.90	16200.	5.22
<9.80	0.67	<9.80	0.24	<0.98	<0.98	<9.80	<4.90	82.00	0.50	<1.50	<9.80	<4.90	7480.	5.54
<10.00	0.99	21.00	0.65	<1.00	<1.00	<10.00	<5.00	91.00	1.14	<1.50	19.00	<5.00	6400.	5.33
<9.90	0.51	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	9.41	<0.99	<1.50	18.00	<4.90	13500.	4.51
<9.90	0.65	31.00	<0.15	<0.99	<0.99	<9.90	<4.90	13.00	<0.99	<1.50	31.00	<4.90	13100.	4.87
														4.18
<9.50	0.46	<14.00	<0.14	<0.95	<0.95	<9.50	<4.80	0.67	<0.95	<1.40	22.00	<4.80	7680.	3.79
<9.90	0.67	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	1.17	<0.99	<1.50	24.00	<4.90	8970.	4.33
<9.20	0.57	<14.00	0.20	<0.92	<0.92	<9.20	<4.60	0.65	<0.92	<1.40	12.00	<4.60	7710.	4.11
<9.90	0.39	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	0.67	<0.99	<1.50	12.00	<4.90	6980.	3.79
<9.90	0.32	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	0.43	<0.99	<1.50	12.00	<4.90	6570.	3.32
<9.60	0.63	<15.00	0.23	<0.96	<0.96	<9.60	<4.80	1.48	<0.96	<1.50	17.00	<4.80	10300.	4.86
<9.90	0.47	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	0.57	<0.99	<1.50	13.00	<5.00	9810.	4.52
<9.30	0.59	<14.00	0.20	<0.93	1.80	<9.30	<4.60	0.84	<0.93	<1.40	15.00	<4.60	7700.	3.89
<9.30	0.31	<14.00	<0.14	<0.93	<0.93	<9.30	<4.70	0.66	<0.93	<1.40	13.00	<4.70	7270.	3.71
<9.40	0.41	<14.00	<0.14	<0.94	<0.94	<9.40	<4.70	6.77	<0.94	<1.40	<9.40	<4.70	7190.	3.33
<9.10	2.42	<11.00	0.15	<0.91	<0.91	<9.10	<4.60	2.30	0.49	<1.40	26.00	<4.60	7860.	4.58
<9.90	1.10	16.00	0.17	<0.99	<0.99	<9.90	<5.00	3.40	0.74	<1.50	17.00	<5.00	7480.	5.15
<9.90	0.77	<9.90	<0.15	<0.99	<0.99	<9.90	<5.00	1.50	<0.50	<1.50	25.00	<5.00	7920.	4.52
<11.00	2.50	20.00	0.51	<1.10	<1.10	<11.00	<5.30	13.70	1.10	<1.60	24.00	<5.30	11300.	5.33
<9.80	0.32	<9.80	<0.15	<0.98	<0.98	<9.80	<4.90	0.67	<0.49	<1.50	<9.80	<4.90	9900.	4.67
<9.60	0.29	<9.60	<0.14	<0.96	<0.96	<9.60	<4.80	2.70	<0.48	<1.40	<9.60	<4.80	10700.	4.89
<9.90	0.44	9.90	0.35	<0.99	<0.99	<9.90	<4.90	10.60	0.55	<1.50	<9.90	<4.90	10900.	4.64
<9.60	0.39	<9.60	<0.14	<0.96	<0.96	<9.60	<4.80	5.50	1.03	<1.40	<9.60	<4.80	1000.	4.57
<9.40	0.45	13.00	0.14	<0.94	<0.94	<9.40	<4.70	21.00	0.97	<1.40	11.00	<4.70	12600.	4.63
<9.50	0.75	<9.50	<0.14	<0.95	<0.95	<9.50	<4.70	3.15	<0.47	<1.40	<9.50	<4.70	11400.	4.56
<9.50	0.91	15.00	<0.14	<0.95	<0.95	<9.50	<4.70	1.98	<0.55	<1.40	<9.50	<4.70	10800.	4.78

Ni dry	Mn dry	Al dry	Ba dry	Co dry	Cr dry	Mo dry	Sb dry	Sr dry	Ti dry	V dry	As dry	Se dry	P dry	WET:DRY RATIO
<9.40	0.75	12.00	<0.14	<0.94	<0.94	<9.40	<4.70	1.53	<0.47	<1.40	<9.40	<4.70	10400.	4.68
<9.70	0.48	<1.50	<0.15	<0.97	<0.97	<9.70	<4.80	1.25	<0.48	<1.50	<9.70	<4.80	10400.	4.88
<9.10	0.57	<9.10	<0.14	<0.91	<0.91	<9.10	<4.60	0.63	<0.46	<1.40	<9.10	<4.60	10500.	4.63
<27.00	0.79	<27.00	<0.40	<2.70	<2.70	<27.00	<13.00	21.60	<1.30	<4.00	<27.00	<13.00	8500.	4.93
														6.14
<9.90	0.93	<9.90	0.22	<0.99	<0.99	<9.90	<4.90	21.80	<0.49	<1.50	<9.90	<4.90	8670.	5.13
24.00	0.99	<15.00	0.25	<0.99	<0.99	<9.90	<5.00	14.10	<0.99	<1.50	15.00	<5.00	10900.	4.30
<95.00	1.93	<95.00	<1.40	<9.50	<9.50	<95.00	<48.00	8.00	<4.80	<14.00	<95.00	<48.00	7020.	5.78
<46.00	1.94	<46.00	<0.68	<4.60	<4.60	<46.00	<23.00	23.70	<2.30	<6.80	<46.00	<23.00	7860.	4.99
<17.00	0.60	<17.00	<0.25	<1.70	<1.70	<17.00	<8.30	11.30	<0.83	<2.50	<17.00	<8.30	7700.	5.16
<13.00	1.47	<13.00	<0.19	<1.30	<1.30	<13.00	<6.30	3.71	<0.63	<1.90	47.00	<6.30	9370.	5.64
<42.00	1.48	<42.00	<0.63	<4.20	<4.20	<42.00	<21.00	5.38	<2.10	<6.30	84.00	<21.00	18400.	5.80
<9.50	3.86	59.00	0.72	<0.95	<0.95	<9.50	<4.80	13.00	3.60	<1.40	81.00	<4.80	9630.	4.97
<9.80	0.40	<9.80	<0.15	<0.98	<0.98	<9.80	<4.90	3.60	<0.49	<1.50	49.00	<4.90	8800.	5.70
<9.70	0.54	<9.70	<0.15	<0.97	1.20	<9.70	<4.90	5.40	<0.49	<1.50	28.00	<4.90	9420.	5.73
<10.00	0.67	14.00	0.18	<1.00	<1.00	<10.00	<5.00	5.40	0.77	<1.50	15.00	<5.00	8890.	5.19
<12.00	0.32	<12.00	<0.18	<1.20	<1.20	<12.00	<5.80	4.30	<0.58	<1.80	45.00	<5.80	8440.	5.78
<9.80	0.28	<9.80	<0.15	<0.98	<0.98	<9.80	<4.90	2.40	<0.49	<1.50	20.00	<4.90	9020.	5.59
<9.50	0.30	<9.50	0.14	<0.95	1.40	<9.50	<4.80	5.30	<0.48	<1.40	59.00	<4.80	8710.	5.58
<9.70	0.52	<9.70	<0.15	<0.97	<0.97	<9.70	<4.80	7.30	<0.48	<1.50	39.00	<4.80	9040.	5.31
<10.00	0.28	<10.00	<0.15	<1.00	<1.00	<10.00	<5.00	3.90	<0.50	<1.50	51.00	<5.00	8880.	5.52
<9.90	0.33	<9.90	<0.15	<0.99	<0.99	<9.90	<4.90	5.60	<0.49	<1.50	65.00	<4.90	9030.	5.78
<9.90	0.28	<9.90	<0.15	<0.99	<0.99	<9.90	<5.00	5.60	<0.50	<1.50	59.00	<5.00	8950.	5.93
<9.80	0.78	<15.00	0.27	<0.98	<0.98	<9.80	<4.90	31.70	<0.98	<1.50	11.00	<4.90	10800.	5.48
<9.50	0.97	23.00	0.40	<0.95	<0.95	<9.50	<4.80	34.80	1.28	<1.40	28.00	<4.80	9210.	5.78
<9.50	0.67	<14.00	0.22	<0.95	<0.95	<9.50	<4.70	18.30	<0.95	<1.40	22.00	<4.70	10600.	4.95
<9.50	0.81	17.00	0.28	<0.95	<0.95	<9.50	<4.80	22.30	1.17	<1.40	15.00	<4.80	11300.	4.76
<9.90	0.83	<15.00	0.31	<0.99	<0.99	<9.90	<5.00	113.00	<0.99	<1.50	9.90	<5.00	8260.	6.80
<9.90	1.10	174.00	0.44	<0.99	<0.99	<9.90	<5.00	104.00	1.15	<1.50	9.90	<5.00	6950.	6.81
<9.90	0.76	17.00	0.26	<0.99	<0.99	<9.90	<5.00	25.60	<0.99	<1.50	17.00	<5.00	11000.	4.99
<9.70	0.70	<15.00	0.19	<0.97	<0.97	<9.70	<4.90	25.40	<0.97	<1.50	9.80	<4.90	9910.	4.77
<9.80	1.00	30.00	0.41	<0.98	<0.98	<9.80	<4.90	61.90	<0.98	<1.50	10.00	<4.90	11100.	5.06
<9.30	0.94	<15.00	0.30	<0.93	<0.93	<9.30	<4.70	28.50	<0.93	<1.40	35.00	<4.70	8920.	4.68
<9.50	0.55	<14.00	0.36	<0.95	<0.95	<9.50	<4.80	0.98	<0.95	<1.40	20.00	<4.80	8760.	4.43
<9.80	0.67	<15.00	0.16	<0.98	<0.98	<9.80	<4.90	4.44	<0.98	<1.50	18.00	<4.90	7630.	3.68
<9.40	0.58	<14.00	0.16	<0.94	<0.94	<9.40	<4.70	1.97	<0.94	<1.40	29.00	<4.70	7920.	3.95
<9.90	0.43	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	0.48	<0.99	<1.50	17.00	<4.90	8090.	4.42
<9.30	0.53	<14.00	0.30	<0.93	<0.93	<9.30	<4.70	0.92	<0.93	<1.40	18.00	<4.70	7790.	4.08
<9.30	0.68	<14.00	0.34	<0.93	<0.93	<9.30	<4.60	1.01	<0.93	<1.40	27.00	<4.60	9530.	5.21
<9.80	0.60	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	0.91	<0.98	<1.50	18.00	<4.90	10200.	4.75
<9.90	0.36	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	10.50	<0.99	<1.50	12.00	<4.90	7870.	3.49

Ni dry	Mn dry	Al dry	Ba dry	Co dry	Cr dry	Mo dry	Sb dry	Sr dry	Ti dry	V dry	As dry	Se dry	P dry	WET:DRY RATIO
<9.50	0.25	<14.00	<0.14	<0.95	<0.95	<9.50	<4.80	0.35	<0.95	<1.40	13.00	<4.80	5100.	2.65
<9.40	0.26	<14.00	<0.14	<0.94	<0.94	<9.40	<4.70	0.34	<0.94	<1.40	9.80	<4.70	6330.	3.33
<9.20	0.30	<9.20	<0.14	<0.92	<0.92	<9.20	<4.60	1.19	<0.46	<1.40	<9.20	<4.60	10200.	4.61
<10.00	0.31	<10.00	<0.15	<1.00	<1.00	<10.00	<5.00	1.16	<0.50	<1.50	<10.00	<5.00	9350.	4.83
<10.00	0.40	<10.00	<0.15	<1.00	<1.00	<10.00	<5.00	2.29	<0.50	<1.50	<10.00	<5.00	9640.	4.33
<9.50	0.34	<9.50	<0.15	<0.95	<0.95	<9.50	<4.80	0.90	<0.48	<1.50	<9.50	<4.80	8450.	4.30
<9.60	0.43	<9.60	<0.14	<0.96	<0.96	<9.60	<4.80	3.69	<0.48	<1.40	<9.60	<4.80	10200.	4.69
<9.70	1.04	<9.70	<0.15	<0.97	<0.97	<9.70	<4.90	8.64	<0.49	<1.50	<9.70	<4.90	11500.	4.88
<9.50	0.53	<9.50	<0.14	<0.95	<0.95	<9.50	<4.80	0.61	<0.48	<1.40	<9.50	<4.80	10400.	4.54
<9.90	0.47	<9.90	<0.15	<0.99	<0.99	<9.90	<4.90	0.92	<0.49	<1.50	<9.90	<4.90	9910.	4.47
<9.60	0.71	<9.60	<0.15	<0.96	<0.96	<9.60	<4.80	1.15	<0.48	<1.50	<9.60	<4.80	10200.	4.67
<42.00	2.52	<42.00	<0.63	<4.20	<4.20	<42.00	<21.00	11.60	<2.10	<6.30	<42.00	<21.00	7230.	5.22
<71.00	1.77	<71.00	<1.10	<7.10	<7.10	<71.00	<36.00	5.07	<3.60	<11.00	<71.00	<36.00	8790.	5.31
<48.00	5.54	<48.00	<0.72	<4.80	<4.80	<48.00	<24.00	7.58	<2.40	<7.20	<48.00	<24.00	5210.	5.83
<38.00	2.89	<38.00	<0.58	<3.80	<3.80	<38.00	<19.00	12.00	<1.90	<5.80	<38.00	<19.00	8500.	6.10
<17.00	3.55	19.00	0.85	<1.70	<1.70	<17.00	<8.70	45.00	0.95	<2.60	18.00	<8.70	10500.	4.79
<9.70	3.03	23.00	6.20	<0.97	<1.80	<9.70	<4.90	229.00	1.10	<1.50	25.00	<4.90	17000.	5.46
<9.80	2.84	15.00	2.19	<0.98	<0.98	<9.80	<4.90	457.00	0.98	<1.50	19.00	<4.90	14500.	4.30
<9.20	3.56	17.00	2.50	<0.92	<0.92	<9.20	<4.60	589.00	0.92	<1.40	12.00	<4.90	14200.	4.51
<9.80	4.93	<15.00	1.78	<0.98	<0.98	<9.80	<4.90	341.00	0.98	<1.50	20.00	<4.90	14200.	4.03
<9.90	1.56	<15.00	1.07	<0.99	<0.99	<9.90	<5.00	253.00	0.99	<1.50	27.00	<5.00	15600.	4.46
<9.50	3.37	<14.00	2.03	<0.95	<0.95	<9.50	<4.80	505.00	0.95	<1.40	15.00	<5.00	14100.	4.28
<9.90	1.35	24.00	0.64	<0.99	<0.99	<9.90	<5.00	105.00	0.99	<1.50	21.00	<5.00	14900.	4.61
<9.80	0.87	<15.00	0.45	<0.98	<0.98	<9.80	<4.90	93.40	0.98	<1.50	<9.80	<4.90	14500.	4.53
<9.90	1.41	22.00	0.66	<0.99	<0.99	<9.90	<4.90	93.60	0.99	<1.50	18.00	<4.90	16200.	5.02
<9.80	1.13	18.00	0.59	<0.98	<0.98	<9.80	<4.90	80.10	<0.98	<1.50	33.00	<4.90	12400.	5.61
<9.80	0.58	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	7.99	<0.98	<1.50	43.00	<4.90	12200.	4.28
<9.50	0.69	<14.00	<0.14	<0.95	<0.95	<9.50	<4.70	9.07	<0.95	<1.40	42.00	<4.70	12600.	4.51
<9.40	0.90	<14.00	<0.14	<0.94	<0.94	<9.40	<4.70	11.60	<0.94	<1.40	44.00	<4.70	12700.	4.85
<9.50	0.67	<14.00	<0.14	<0.95	<0.95	<9.50	<4.80	8.12	<0.95	<1.40	40.00	<4.80	12400.	4.41
<9.90	0.72	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	9.21	<0.99	<1.50	36.00	<5.00	12100.	4.31
<9.90	0.85	<15.00	0.31	<0.99	<0.99	<9.90	<5.00	42.90	<0.99	<1.50	39.00	<5.00	11900.	4.33
<9.60	0.47	<14.00	<0.14	<0.96	<0.96	<9.60	<4.80	6.53	<0.96	<1.40	44.00	<4.80	12400.	4.36
<9.90	0.73	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	23.10	<0.99	<1.50	41.00	<5.00	12100.	4.43
<9.50	0.81	<14.00	<0.14	<0.95	<0.95	<9.50	<4.70	10.60	<0.95	<1.40	41.00	<4.70	15300.	4.50
<10.00	0.53	<15.00	<0.15	<1.00	<1.00	<10.00	<5.00	10.10	<1.00	<1.50	60.00	<5.00	14300.	4.43
<27.00	1.13	<41.00	<0.41	<2.70	<2.70	<27.00	<14.00	28.40	<2.70	<4.10	29.00	<14.00	8440.	4.23

Ni dry	Mn dry	Al dry	Ba dry	Co dry	Cr dry	Mo dry	Sb dry	Sr dry	Ti dry	V dry	As dry	Se dry	P dry	WET:DRY RATIO
<17.00	0.97	<26.00	<0.26	<1.70	<1.70	<17.00	<8.70	30.40	<1.70	<2.60	33.00	<8.70	8780.	4.22
<38.00	1.16	<57.00	<0.57	<3.80	<3.80	<38.00	<1.90	30.80	<3.80	<5.70	38.00	<19.00	8040.	4.24
<30.00	1.69	<46.00	0.66	<3.00	<3.00	<30.00	<15.00	35.40	<3.00	<4.60	33.00	<15.00	8660.	4.30
<16.00	0.78	<24.00	<0.24	<1.60	<1.60	<16.00	<8.10	28.20	<1.60	<2.40	42.00	<8.10	9200.	4.29
<25.00	1.01	<38.00	<0.38	<2.50	<2.50	<25.00	<13.00	51.50	<2.50	<3.80	40.00	<13.00	9030.	4.42
<18.00	0.97	<27.00	<0.27	<1.80	<1.80	<18.00	<8.90	26.20	<1.80	<2.70	27.00	<8.90	9130.	4.37
<11.00	1.80	<16.00	<0.16	<1.10	<1.10	<11.00	<5.30	31.70	<1.10	<1.60	36.00	<5.30	9870.	4.50
<17.00	0.81	<26.00	<0.26	<1.70	<1.70	<17.00	<8.70	29.10	<1.70	<2.60	35.00	<8.70	8880.	4.39
<25.00	1.01	<37.00	<0.37	<2.50	<2.50	<25.00	<12.00	22.60	<2.50	<3.70	34.00	<12.00	8840.	4.19
<25.00	0.73	<37.00	<0.37	<2.50	<2.50	<25.00	<12.00	29.10	<2.50	<3.70	32.00	<12.00	8580.	4.15
<21.00	1.19	<31.00	<0.31	<2.10	<2.10	<21.00	<1.00	24.90	<2.10	<3.10	32.00	<10.00	8550.	4.28
<9.40	0.30	<14.00	0.27	<0.94	<0.94	<9.40	<4.70	1.09	<0.94	<1.40	17.00	<4.70	8080.	3.77
<9.20	0.49	<14.00	<0.14	<0.92	4.60	<9.20	<4.60	1.12	<0.92	<1.40	16.00	<4.60	9570.	4.04
<9.60	0.47	<15.00	<0.15	<0.96	<0.96	<9.60	<4.80	0.87	<0.96	<1.50	10.00	<4.80	10600.	4.32
<9.80	0.86	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	1.61	<0.98	<1.50	20.00	<4.90	10100.	4.44
<9.80	0.49	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	1.52	<0.98	<1.50	19.00	<4.90	10400.	4.45
<9.50	0.74	<14.00	0.18	<0.95	<0.95	<9.50	<4.80	4.34	<0.95	<1.40	19.00	<4.80	10200.	4.03
<9.60	0.34	<14.00	<0.14	<0.96	<0.96	<9.60	<4.80	0.56	<0.96	<1.40	<9.60	<4.80	9430.	3.93
<0.97	0.24	<15.00	<0.15	<0.97	<0.97	<9.70	<4.80	0.50	<0.97	<1.50	14.00	<4.80	7270.	3.48
<0.97	0.29	<15.00	0.15	<0.97	1.30	<9.70	<4.80	0.32	<0.97	<1.50	<9.70	<4.80	6340.	3.37
<0.94	0.37	<14.00	0.20	<0.94	<0.94	<9.40	<4.70	0.28	<0.94	<1.40	9.80	<4.70	7630.	3.84
<15.00	3.18	<23.00	<0.23	<1.50	<1.50	<15.00	<7.60	4.32	<1.50	<2.30	<15.00	<7.60	13600.	4.38
<23.00	2.54	<34.00	<0.34	<2.30	<2.30	<23.00	<12.00	2.62	<2.30	<3.40	<23.00	<12.00	10300.	3.99
<17.00	2.27	<25.00	0.92	<1.70	<1.70	<17.00	<8.40	1.91	<1.70	<2.50	<17.00	<8.40	9680.	3.68
<10.00	0.31	<15.00	<0.15	<1.00	<1.00	<10.00	<5.00	2.30	<1.00	<1.50	<10.00	<5.00	6000.	2.96
<9.90	0.45	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	4.88	<0.99	<1.50	<9.90	<4.90	10400.	4.44
<9.20	0.49	<14.00	0.16	<0.92	<0.92	<9.20	<4.60	10.30	<0.92	<1.40	<9.20	<4.60	11700.	4.48
<9.90	0.47	<15.00	<0.15	<0.99	1.00	<0.99	<4.90	3.23	<0.99	<1.50	<9.90	<4.90	10800.	4.28
<9.80	0.34	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	1.16	<0.98	<1.50	<9.80	<4.90	9110.	4.38
<9.60	0.44	<15.00	0.18	<0.96	<0.96	<9.60	<4.80	17.10	<0.96	<1.50	<9.60	<4.80	10700.	3.42
<9.90	0.68	<15.00	0.25	<0.99	<0.99	<9.90	<4.90	8.96	<0.99	<1.50	<9.90	<4.90	9850.	4.53
<9.20	0.92	<14.00	0.19	<0.92	<0.92	<9.20	<4.60	12.60	<0.92	<1.40	<9.20	<4.60	11800.	4.24
<9.90	0.34	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	0.15	<0.99	<1.50	<9.90	<5.00	6860.	2.66

Ni dry	Mn dry	Al dry	Ba dry	Co dry	Cr dry	Mo dry	Sb dry	Sr dry	Ti dry	V dry	As dry	Se dry	P dry	WET:DRY RATIO	
<9.80	0.39	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	5.09	<0.98	<1.50	31.00	<4.90	14500.	4.16	
<9.90	1.51	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	7.47	<0.99	<1.50	31.00	<5.00	14200.	4.60	
<9.90	0.40	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	5.30	<0.99	<1.50	40.00	<4.90	14900.	4.37	
<9.80	0.97	<15.00	<0.17	<0.98	<0.98	<9.80	<4.90	27.40	<0.98	<1.50	35.00	<4.90	15100.	4.15	
<9.80	0.50	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	10.90	<0.98	<1.50	56.00	<4.90	15600.	4.21	
<9.80	1.26	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	6.46	<0.98	<1.50	46.00	<4.90	17700.	4.49	
<9.50	0.55	<14.00	<0.14	<0.95	1.30	<9.50	<4.80	10.50	<0.95	<1.40	47.00	<4.80	16200.	4.21	
<9.90	0.55	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	5.92	<0.99	<1.50	38.00	<4.90	16900.	4.21	
<9.30	0.51	<14.00	<0.14	<0.93	<0.93	<9.30	<4.60	5.00	<0.93	<1.40	41.00	<4.60	17500.	4.20	
<9.80	0.79	<14.00	<0.14	<0.98	<0.98	<9.80	<4.90	6.90	<0.98	<1.40	39.00	<4.80	17400.	4.28	
<21.00	50.30	57.00	2.33	<2.10	<2.10	<21.00	<10.00	193.00	2.60	<3.10	34.00	<10.00	11700.	4.50	
<19.00	40.60	45.00	0.79	<1.90	<1.90	<19.00	<9.50	50.80	1.80	<2.80	65.00	<9.50	11500.	3.95	
<13.00	36.60	109.00	1.24	<1.30	<1.30	<13.00	<6.50	45.30	4.30	<1.90	24.00	<6.50	11900.	4.52	
<11.00	16.60	39.00	0.62	<1.10	<1.10	<11.00	<5.60	46.30	1.40	<1.70	23.00	<5.60	11900.	3.89	
<9.80	20.40	45.00	0.66	<0.98	<0.98	<9.80	<4.90	36.80	1.90	<1.50	42.00	<4.90	11700.	4.78	
<16.00	17.90	48.00	1.36	<1.60	<1.60	<16.00	<7.80	103.00	2.00	<2.40	22.00	<7.80	10300.	4.44	
<10.00	13.70	21.00	0.20	<1.00	<1.00	<10.00	<5.10	8.40	0.73	<1.50	36.00	<5.10	10800.	4.36	
<13.00	14.50	37.00	0.61	<1.30	<1.30	<13.00	<6.30	35.50	1.70	<1.90	21.00	<6.30	10500.	4.25	
<9.70	9.20	12.00	0.29	<0.97	<0.97	<9.70	<4.80	28.60	<0.48	<1.50	25.00	<4.80	11000.	4.32	
<9.30	14.40	28.00	0.38	<0.93	<0.93	<9.30	<4.70	16.00	1.20	<1.40	35.00	<4.70	11300.	4.38	
<36.00	38.80	<36.00	0.87	<3.60	<3.60	<36.00	<18.00	96.30	<1.80	<5.40	38.00	<18.00	10600.	3.75	
<38.00	19.30	<38.00	0.63	<3.80	<3.80	<38.00	<19.00	78.10	<1.90	<5.70	38.00	<19.00	9910.	3.93	
<46.00	35.20	46.00	1.20	<4.60	<4.60	<46.00	<23.00	91.00	<2.30	<6.90	46.00	<23.00	10200.	3.83	
<17.00	23.60	33.00	0.30	<1.70	<1.70	<17.00	<8.60	9.90	<0.86	<2.60	80.00	<8.60	10700.	4.64	
<17.00	25.60	35.00	0.35	<1.70	<1.70	<17.00	<8.30	7.00	1.70	<2.50	74.00	<8.30	10400.	4.26	
<31.00	25.80	<31.00	0.85	<3.10	<3.10	<31.00	<15.00	64.50	<1.50	<4.60	55.00	<15.00	11300.	4.53	
<22.00	16.60	30.00	0.41	<2.20	<2.20	<22.00	<11.00	13.90	<1.10	<3.30	58.00	<11.00	10300.	4.36	
<14.00	26.80	<14.00	0.29	<1.40	<1.40	<14.00	<7.00	33.00	<0.70	<2.10	50.00	<7.00	10600.	4.09	
<19.00	28.60	43.00	0.85	<1.80	<1.80	<18.00	<9.20	11.60	1.50	<2.80	72.00	<9.20	10900.	4.68	
<17.00	16.60	<17.00	0.34	<1.70	<1.70	<17.00	<8.40	45.60	<0.84	<2.50	80.00	<8.40	10700.	4.35	
														2.20	*
														1.76	*
														1.59	*
														2.23	*
														1.57	*
														1.96	*
														2.76	*
														1.77	*
														2.47	*
														2.27	*
<9.60	0.56	<9.60	<0.14	<0.96	<0.96	<9.60	<4.80	4.55	<0.48	<1.40	<9.60	<4.80	9020.	4.75	
<9.40	0.39	<9.40	<0.14	<0.94	<0.94	<9.40	<4.70	3.82	<0.47	<1.40	<9.40	<4.70	9300.	4.79	

Ni dry	Mn dry	Al dry	Ba dry	Co dry	Cr dry	Mo dry	Sb dry	Sr dry	Tl dry	V dry	As dry	Se dry	P dry	WET:DRY RATIO
<9.80	2.80	<9.80	0.16	<0.98	<0.98	<9.80	<4.90	6.20	<0.49	<1.50	46.00	<4.90	7580.	4.94
<9.50	0.29	<9.50	<0.14	<0.95	<0.95	<9.50	<4.80	8.60	<0.48	<1.40	<9.50	<4.80	9000.	5.09
<9.70	0.38	<9.70	<0.15	<0.97	<0.97	<9.70	<4.80	3.77	<0.48	<1.50	<9.60	<4.80	8910.	4.80
<9.80	0.38	<9.80	<0.15	<0.98	<0.98	<9.80	<4.90	5.52	<0.49	<1.50	<9.80	<4.90	9360.	4.60
<9.50	0.38	<9.50	<0.14	<0.95	<0.95	<9.50	<4.80	1.88	<0.48	<1.40	<9.50	<4.80	8760.	4.65
<9.90	0.63	<9.90	<0.15	<0.99	<0.99	<9.90	<5.00	2.05	<0.50	<1.50	<9.90	<5.00	9950.	5.19
<9.30	0.60	<9.30	<0.14	<0.93	<0.93	<9.30	<4.60	0.93	<0.46	<1.40	<9.30	<4.60	9770.	4.99
<9.80	2.00	<9.80	<0.15	<0.98	<0.98	<9.80	<4.90	2.60	<0.49	<1.50	42.00	<4.90	8230.	5.61
<9.90	1.10	<9.90	<0.15	<0.99	<0.99	<9.90	<5.00	2.30	<0.50	<1.50	51.00	<5.00	7750.	5.06
<9.80	1.01	<15.00	0.78	<0.98	<0.98	<9.80	<4.90	230.00	<0.98	<1.50	<9.80	<4.90	13900.	5.36
<10.00	1.56	15.00	0.39	<1.00	<1.00	<10.00	<5.00	172.00	<1.00	<1.50	10.00	<5.00	8200.	4.56
<9.70	0.89	15.00	0.36	<0.97	<0.97	<9.70	<4.80	94.70	<0.97	<1.50	12.00	<4.80	6420.	4.49
<9.70	1.78	61.00	1.02	<0.97	<0.97	<9.70	<4.80	63.00	2.41	<1.50	12.00	<4.80	14600.	4.56
<9.50	1.16	<9.40	0.40	<0.94	<0.94	<9.40	<4.70	31.70	<0.47	<1.40	20.00	<4.70	12700.	4.46
<9.50	1.03	<9.50	0.48	<0.95	<0.95	<9.50	<4.70	35.70	<0.47	<1.40	14.00	<4.70	12900.	4.28
<9.60	1.87	19.00	1.11	<0.96	<0.96	<9.60	<4.80	86.10	<0.86	<1.50	22.00	<4.80	13100.	5.05
<9.80	0.58	<9.80	<0.15	<0.98	<0.98	<9.80	<4.90	18.50	<0.49	<1.50	12.00	<4.90	12500.	5.12
<9.30	0.66	<9.30	<0.19	<0.93	11.70	<9.30	<4.70	14.30	0.58	<1.40	14.00	<4.70	13000.	4.46
<9.80	0.94	<9.80	<0.24	<0.98	<0.98	<9.80	<4.90	52.80	0.60	<1.50	<9.80	<4.90	12800.	5.12
<9.60	1.21	<9.60	<0.14	<0.96	<0.96	<9.60	<4.80	13.30	<0.48	<1.40	12.00	<4.80	12400.	4.45
<9.90	0.89	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	23.10	<0.99	<1.50	45.00	<4.90	10500.	4.61
<10.00	0.91	<15.00	<0.15	<1.00	<1.00	<10.00	<5.00	21.30	<1.00	<1.50	37.00	<5.00	10500.	4.48
<9.70	1.57	<16.00	<0.15	<0.97	<0.97	<9.70	<4.80	18.70	<0.97	<1.50	39.00	<4.90	9100.	3.41
<9.40	1.41	<14.00	<0.14	<0.94	<0.94	<9.40	<4.70	19.70	<0.94	<1.40	51.00	<4.70	10600.	4.41
<9.90	1.21	<15.00	<0.15	<0.99	1.00	<9.90	<4.90	18.90	<0.99	<1.50	51.00	<4.90	10300.	4.54
<9.50	0.98	<14.00	<0.14	<0.95	<0.95	<9.50	<4.80	18.90	<0.95	<1.40	37.00	<4.80	10200.	4.31
<9.80	1.54	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	17.70	<0.98	<1.50	100.00	<4.90	10800.	4.31
<9.70	1.12	<15.00	<0.15	<0.97	<0.97	<9.70	<4.80	16.10	<0.97	<1.50	74.00	<4.80	10200.	3.68
<9.70	1.02	<15.00	<0.15	<0.97	<0.97	<9.70	<4.90	17.40	<0.97	<1.50	25.00	<4.90	9490.	4.02
<9.70	1.05	<15.00	<0.15	<0.97	<0.97	<9.70	<4.90	22.90	<0.97	<1.50	26.00	<4.90	10200.	4.62
<9.90	1.71	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	20.90	<0.99	<1.40	29.00	<5.00	10900.	4.58
<9.50	0.75	<14.00	<0.14	<0.95	<0.95	<9.50	<4.70	19.20	<0.95	<1.40	29.00	<4.70	10200.	4.33
<9.30	0.37	<14.00	0.83	<0.93	<0.93	<9.30	<4.70	7.90	<0.93	<1.40	<9.30	<4.70	8110.	4.51
<9.90	1.56	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	25.00	<0.99	<1.50	57.00	<4.90	10200.	3.29
<9.60	0.61	<14.00	<0.14	<0.96	<0.96	<9.60	<4.80	14.40	<0.96	<1.40	23.00	<4.80	7140.	2.90
<9.80	0.91	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	24.90	<0.98	<1.50	36.00	<4.90	10900.	4.55
<9.80	1.31	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	21.00	<0.98	<1.50	42.00	<4.90	10600.	4.19
<9.70	0.90	<15.00	<0.15	<0.97	<0.97	<9.70	<4.90	18.80	<0.97	<1.50	41.00	<4.90	8720.	3.60
<9.70	1.04	<15.00	<0.15	<0.97	<0.97	<9.70	<4.80	25.90	<0.97	<1.50	50.00	<4.80	9070.	4.17
<9.60	0.87	<15.00	<0.15	<0.96	<0.96	<9.60	<4.80	16.40	<0.96	<1.50	47.00	<4.80	8790.	3.60
<9.90	0.68	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	16.60	<0.99	<1.50	24.00	<5.00	7670.	3.22

Ni dry	Mn dry	Al dry	Ba dry	Co dry	Cr dry	Mo dry	Sb dry	Sr dry	Ti dry	V dry	As dry	Se dry	P dry	WET:DRY RATIO
<9.30	1.54	<14.00	<0.14	<0.93	<0.93	<9.30	<4.70	17.80	<0.93	<1.40	116.00	<4.70	10600.	3.59
<9.90	0.69	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	19.70	<0.99	<1.50	55.00	<4.90	10000.	4.31
<9.60	0.72	<14.00	<0.14	<0.96	<0.96	<9.60	<4.80	19.70	<0.96	<1.40	48.00	<4.80	7890.	3.50
<9.30	1.01	<14.00	<0.14	<0.93	<0.93	<9.30	<4.70	25.80	<0.93	<1.40	50.00	<4.70	10500.	4.76
<10.00	0.67	<15.00	<0.15	<1.00	<1.00	<10.00	<5.00	17.30	<1.00	<1.50	38.00	<5.00	9460.	4.35
<10.00	0.76	<15.00	<0.15	<1.00	<1.00	<10.00	<5.00	22.20	<1.00	<1.50	48.00	<5.00	9820.	4.22
<9.80	1.07	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	20.20	<0.98	<1.50	55.00	<4.90	9650.	4.41
<9.50	0.93	<14.00	<0.14	<0.95	<0.95	<9.50	<4.70	22.90	<0.95	<1.40	53.00	<4.70	10600.	4.71
<9.80	0.83	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	22.80	<0.98	<1.50	53.00	<4.90	10300.	4.53
<9.80	1.46	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	19.90	<0.98	<1.50	41.00	<4.90	9400.	3.75
<9.80	1.63	<15.00	0.21	<0.98	<0.98	<9.80	<4.90	28.80	<0.98	<1.50	40.00	<4.90	10900.	4.64
<9.80	0.91	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	16.60	<0.98	<1.50	92.00	<4.90	12800.	4.31
<9.90	2.25	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	8.67	<0.99	<1.50	71.00	<5.00	12400.	4.52
<9.20	0.91	<14.00	<0.14	<0.92	<0.92	<9.20	<4.60	13.00	<0.92	<1.40	37.00	<4.60	11500.	4.72
<10.00	1.88	<15.00	<0.15	<1.00	<1.70	<10.00	<5.00	14.90	<1.00	<1.50	128.00	<5.00	12000.	4.64
<9.90	1.08	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	10.30	<0.99	<1.50	80.00	<4.90	12300.	4.60
<9.60	0.95	<14.00	<0.14	<0.96	<0.96	<9.60	<4.80	10.80	<0.96	<1.40	33.00	<4.80	13500.	4.20
<9.10	0.77	<14.00	<0.14	<0.91	<0.91	<9.10	<4.60	11.40	<0.91	<1.40	69.00	<4.60	12400.	4.62
<9.90	0.94	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	14.60	<0.99	<1.50	56.00	<5.00	12000.	4.75
<9.80	0.79	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	12.10	<0.98	<1.50	90.00	<4.90	11800.	4.76
<9.20	0.39	<14.00	0.40	<0.92	<0.92	<9.20	<4.60	1.14	<0.92	<1.40	<9.90	<4.60	7520.	3.76
<9.40	0.30	<14.00	0.28	<0.94	<0.94	<9.40	<4.70	1.02	<0.94	<1.40	<9.40	<4.70	5960.	3.22
<9.80	0.72	<15.00	0.36	<0.98	<0.98	<9.80	<4.90	1.78	<0.98	<1.50	<9.80	<4.90	8500.	4.05
<9.60	0.38	<14.00	0.18	<0.96	<0.96	<9.60	<4.80	1.00	<0.96	<1.40	25.00	<4.80	8150.	3.84
<9.80	1.11	<15.00	0.28	<0.98	<0.98	<9.80	<4.90	1.79	<0.98	<1.50	24.00	<4.90	9700.	4.45
<9.60	0.55	<14.00	0.56	<0.96	<0.96	<9.60	<4.80	1.02	<0.96	<1.40	17.00	<4.80	9610.	4.18
<9.50	0.49	<14.00	0.39	<0.95	<0.95	<9.50	<4.80	2.08	<0.95	<1.40	82.00	<4.80	9260.	4.53
<10.00	0.63	<15.00	0.62	<1.00	1.60	<10.00	<5.00	2.40	<1.00	<1.50	11.00	<5.00	9270.	4.17
<9.20	0.67	<14.00	0.31	<0.92	<0.92	<9.20	<4.60	3.27	<0.92	<1.40	64.00	<4.60	9460.	4.33
<9.30	0.58	<9.30	<0.14	<0.93	<0.93	<9.30	<4.70	1.99	<0.47	<1.40	21.00	<4.70	9870.	4.77
<9.50	6.59	<14.00	0.16	<0.95	2.30	<9.50	<4.80	1.64	<0.95	<1.40	<9.50	<4.80	9900.	3.20
<9.60	2.37	<14.00	0.24	<0.96	<0.96	<9.60	<4.80	27.70	<0.96	<1.40	<9.60	<4.80	13800.	4.55
<9.90	1.40	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	5.18	<0.99	<1.50	<9.90	<5.00	11300.	4.55
<9.90	1.19	<15.00	0.48	<0.99	<0.99	<9.90	<5.00	3.31	<0.99	<1.50	<9.90	<5.00	11200.	4.48
<9.50	1.22	<14.00	0.37	<0.95	<0.95	<9.50	<4.80	0.96	<0.95	<1.40	<9.50	<4.80	11600.	4.51
<9.30	1.11	<14.00	<0.14	<0.93	<0.93	<9.30	<4.70	1.11	<0.93	<1.40	<9.30	<4.70	10500.	4.57
<9.90	1.34	<9.90	<0.15	<0.99	<0.99	<9.90	<5.00	11.40	<0.50	<1.50	<9.90	<5.00	12300.	4.61
<9.90	0.26	<9.90	<0.15	<0.99	<0.99	<9.90	<4.90	0.69	<0.49	<1.50	<9.90	<4.90	9460.	4.64
<9.70	0.60	<9.70	<0.15	<0.97	<0.97	<9.70	<4.90	6.89	<0.49	<1.50	<9.70	<4.90	9630.	4.96
<9.50	0.35	<9.50	<0.14	<0.95	<0.95	<9.50	<4.70	7.47	<0.47	<1.40	<9.50	<4.70	10700.	4.87
<10.00	0.30	<10.00	<0.15	<1.00	<1.00	<10.00	<5.00	2.52	<0.50	<1.50	<10.00	<5.00	10100.	5.02
<9.30	0.26	<9.30	<0.14	<0.93	<0.93	<9.30	<4.60	2.68	<0.47	<1.40	<9.30	<4.70	9360.	4.59
<9.50	0.39	<14.00	<0.14	<0.95	<0.95	<9.50	<4.80	5.17	<0.95	<1.40	9.90	<4.80	9970.	4.40
<9.80	0.40	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	0.69	<0.98	<1.50	<9.80	<4.90	9670.	4.44
<12.00	0.42	<18.00	<0.18	<1.20	<1.20	<12.00	<5.90	0.55	<1.20	<1.80	<12.00	<5.90	9540.	4.48
<9.10	0.81	<14.00	<0.14	<0.91	<0.91	<9.10	<4.60	3.36	<0.91	<1.40	<9.10	<4.60	9690.	4.51
<10.00	0.46	<15.00	<0.15	<1.00	<1.00	<10.00	<5.00	3.92	<1.00	<1.50	<10.00	<5.00	10100.	4.52

Ni dry	Mn dry	Al dry	Ba dry	Co dry	Cr dry	Mo dry	Sb dry	Sr dry	Ti dry	V dry	As dry	Se dry	P dry	WET:DRY RATIO
<9.30	0.27	<9.30	<0.14	<0.93	<0.93	<9.30	<4.60	0.78	<0.46	<1.40	<9.30	<4.70	9310.	4.17
<9.10	1.04	<14.00	<0.14	<0.91	<0.91	<9.10	<4.60	3.08	<0.91	<1.40	15.00	<4.60	9850.	4.14
<10.00	0.96	23.00	0.44	<1.00	<1.00	<10.00	<5.00	20.70	1.50	<1.50	12.00	<5.00	11500.	5.16
<9.50	<0.19	<14.00	<0.14	<0.95	<0.95	<9.50	<4.80	123.00	<0.95	<1.40	<9.50	<4.80	13000.	4.37
<9.90	0.86	17.00	0.38	<0.99	<0.99	<9.90	<4.90	83.00	<0.99	<1.50	<9.90	<4.90	11000.	6.04
<9.30	0.95	<14.00	0.37	<0.93	<0.93	<9.30	<4.60	85.10	<0.93	<1.40	<9.30	<4.60	13100.	4.25
<9.30	0.88	14.00	0.28	<0.93	<0.93	<9.30	<4.60	53.70	<0.93	<1.40	<9.30	<4.60	12500.	5.68
<9.40	0.69	<14.00	0.34	<0.94	<0.94	<9.40	<4.70	27.40	<0.94	<1.40	13.00	<4.70	13000.	5.81
<9.40	1.14	16.00	0.53	<0.94	<0.94	<9.40	<4.70	62.00	<0.47	<1.40	24.00	<4.70	13800.	4.86
<9.50	1.01	<9.50	0.37	<0.95	<0.95	<9.50	<4.80	42.10	<0.48	<1.40	24.00	<4.80	15100.	4.32
<10.00	3.14	31.00	1.56	<1.00	<1.00	<10.00	<5.00	157.00	1.31	<1.50	21.00	<5.00	11500.	4.80
<9.30	0.93	22.00	0.22	<0.93	<0.93	<9.30	<4.60	30.70	0.87	<1.40	<9.30	<4.60	12600.	4.57
<9.80	0.96	<15.00	<0.15	<0.98	<0.98	<9.80	<4.90	14.30	<0.98	<1.50	36.00	<4.90	10100.	4.50
<9.80	1.59	20.00	0.19	<0.98	<0.98	<9.80	<4.90	25.40	<0.98	<1.50	49.00	<4.90	11400.	4.63
<9.50	0.90	<14.00	<0.14	<0.95	<0.95	<9.50	<4.80	21.40	<0.95	<1.40	45.00	<4.80	9910.	4.34
<9.70	0.96	<15.00	<0.15	<0.97	<0.97	<9.70	<4.80	25.40	<0.97	<1.50	38.00	<4.80	10400.	4.73
<9.70	0.72	<15.00	<0.15	<0.97	<0.97	<9.70	<4.80	13.40	<0.97	<1.50	45.00	<4.80	8870.	3.34
<10.00	0.94	<15.00	<0.15	<1.00	<1.00	<10.00	<5.00	13.70	<1.00	<1.50	34.00	<5.00	9580.	4.37
<9.90	0.94	<15.00	<0.15	<0.99	<0.99	<9.90	<5.00	18.30	<0.99	<1.50	44.00	<5.00	8960.	4.57
<9.20	1.41	<14.00	<0.14	<0.92	<0.92	<9.20	<4.60	26.80	<0.92	<1.40	78.00	<4.60	10800.	4.77
<9.70	0.82	<15.00	<0.15	<0.97	<0.97	<9.70	<4.90	20.40	<0.97	<1.50	37.00	<4.90	9250.	3.45
<9.20	0.92	<14.00	<0.14	<0.92	<0.92	<9.20	<4.60	16.40	<0.92	<1.40	31.00	<4.60	10000.	4.20
<66.00	4.42	<99.00	<0.99	<6.60	<6.60	<66.00	<33.00	24.70	<6.60	<9.90	<66.00	<33.00	7360.	4.62
<36.00	1.51	<55.00	<0.55	<3.60	<3.60	<36.00	<18.00	15.70	<3.60	<5.50	40.00	<18.00	8240.	4.48
<32.00	1.22	<48.00	<0.48	<3.20	<3.20	<32.00	<16.00	20.20	<3.20	<4.80	49.00	<16.00	9210.	4.25
<33.00	0.82	<49.00	<0.49	<3.30	<3.30	<33.00	<16.00	19.30	<3.30	<4.90	38.00	<16.00	7990.	4.55
<43.00	1.60	<65.00	<0.65	<4.30	<4.30	<43.00	<22.00	17.00	<4.30	<6.50	<43.00	<22.00	8110.	4.50
<51.00	1.38	<77.00	<0.77	<5.10	<5.10	<51.00	<26.00	14.20	<5.10	<7.70	<51.00	<26.00	8460.	4.48
<38.00	1.36	<57.00	<0.57	<3.80	<3.80	<38.00	<19.00	35.60	<3.80	<5.70	<38.00	<19.00	8290.	4.64
<36.00	1.82	<54.00	0.62	<3.60	<3.60	<36.00	<18.00	17.40	<3.60	<5.40	49.00	<18.00	8110.	4.52
<39.00	0.86	<59.00	<0.59	<3.90	<3.90	<39.00	<20.00	13.40	<3.90	<5.90	<39.00	<20.00	8010.	4.53
<28.00	0.87	<41.00	<0.41	<2.80	<2.80	<28.00	<14.00	13.20	<2.80	<4.10	43.00	<14.00	8620.	4.43
<40.00	1.42	<60.00	<0.60	<4.00	<4.00	<40.00	<20.00	15.00	<4.00	<6.00	48.00	<20.00	1560.	4.49
<9.90	0.41	<15.00	<0.15	<0.99	<0.99	<9.90	<4.90	1.22	<0.99	<1.50	23.00	<4.90	7500.	2.91
<9.30	0.42	<14.00	0.50	<0.93	<0.93	<9.30	<4.70	1.64	<0.93	<1.40	9.90	<4.70	7910.	3.89
<9.60	0.93	<15.00	0.28	<0.96	<0.96	<9.60	<4.80	19.40	<0.96	<1.50	15.00	<4.80	10400.	4.22
<9.20	0.58	<14.00	0.48	<0.92	1.00	<9.20	<4.60	1.11	<0.92	<1.40	12.00	<4.60	8550.	4.12
<9.10	0.61	<14.00	0.51	<0.91	<0.91	<9.10	<4.60	1.64	<0.91	<1.40	17.00	<4.60	8550.	3.59
<9.90	0.24	<15.00	0.21	<0.99	<0.99	<9.90	<4.90	0.96	<0.99	<1.50	<9.90	<4.90	7550.	3.44
<9.60	0.30	<14.00	0.16	<0.96	<0.96	<9.60	<4.80	1.20	<0.96	<1.40	21.00	<4.80	6580.	3.20
<9.90	0.56	<15.00	0.21	<0.99	<0.99	<9.90	<5.00	2.51	<0.99	<1.50	20.00	<5.00	9020.	4.24
<10.00	0.66	<15.00	0.17	<1.00	<1.00	<10.00	<5.00	3.15	<1.00	<1.50	21.00	<5.00	8870.	4.11
<9.50	0.62	<14.00	0.75	<0.95	<0.95	<9.50	<4.80	1.89	<0.95	<1.40	14.00	<4.80	8870.	4.25

Ni dry	Mn dry	Al dry	Ba dry	Co dry	Cr dry	Mo dry	Sb dry	Sr dry	Ti dry	V dry	As dry	Se dry	P dry	WET:DRY RATIO
<9.10	0.46	<9.10	<0.14	<0.91	<0.91	<9.10	<4.60	7.00	<0.46	<1.40	<9.10	<4.60	9570.	4.70
<9.60	0.39	<9.60	<0.14	<0.96	<0.96	<9.60	<4.80	8.42	<0.48	<1.40	<9.60	<4.80	10600.	4.68
<9.80	0.37	<9.80	<0.15	<0.98	<0.98	<9.80	<4.90	4.60	<0.49	<1.50	<9.80	<4.90	10600.	4.74
<9.90	0.51	<9.90	<0.15	<0.99	<0.99	<9.90	<5.00	3.50	<0.50	<1.50	<9.90	<5.00	11000.	4.93
<9.50	0.43	<9.50	<0.14	<0.95	<0.95	<9.50	<4.70	4.08	<0.47	<1.40	<9.50	<4.70	10600.	4.71
<9.60	0.41	<9.60	<0.14	<0.96	<0.96	<9.60	<4.80	0.68	<0.48	<1.40	<9.60	<4.80	9520.	4.78
<9.80	0.72	<9.80	<0.15	<0.98	<0.98	<9.80	<4.90	6.01	<0.49	<1.50	<9.80	<4.90	11500.	4.97
<9.40	1.07	<9.40	<0.14	<0.94	<0.94	<9.40	<4.70	3.75	<0.47	<1.40	<9.40	<4.70	11000.	4.84
<9.80	0.57	<9.80	<0.15	<0.98	<0.98	<9.80	<4.90	0.56	<0.49	<1.50	<9.70	<4.90	10600.	4.79
<9.70	0.56	<9.70	<0.15	<0.97	<0.97	<9.70	<4.90	2.41	<0.49	<1.50	<9.70	<4.90	11200.	4.76
<9.60	0.54	<9.60	<0.14	<0.96	<0.96	<9.60	<4.80	0.47	<0.48	<1.40	<9.60	<4.80	10800.	4.56

TABLE 8. Summary of trace metal content data for crustaceans and fishes from Howe Sound, British Columbia, March 1971 to November 1971.

Common Name (Species)	TRACE METALS ($\mu g\ g^{-1}$) MERCURY Wet Wt. $\bar{x} \pm$ S.D. (Range)	n	COPPER Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	ZINC Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	CADMIUM Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	LEAD Dry Wt. $\bar{x} \pm$ S.D. (Range)	n	NICKEL Dry Wt. $\bar{x} \pm$ S.D. (Range)
CRUSTACEANS											
Dungeness crab *(Cancer magister)*	1.35 ± 0.81 (0.22 – 3.39)	48	47.72 ± 18.55 (22.00 – 90.00)	40	221.32 ± 41.49 (170.00 – 340.00)	40	0.13 ± 0.06 (0.07 – 0.35)	25	3.59 ± 8.75 (0.20 – 49.60)	35	2.96 ± 4.81 (0.31 – 22.60)
prawn *(Pandalus platyceros)*	0.43 ± 0.21 (0.20 – 0.62)	4									
shrimp (unidentified)	0.25	1									
FISHES											
spiny dogfish *(Squalus acanthias)*	1.46 ± 0.56 (0.47 – 2.23)	13	2.19 ± 1.26 (1.00 – 4.90)	7	11.69 ± 10.58 (4.10 – 35.00)	7	0.14 ± 0.04 (0.10 – 0.20)	4	0.78 ± 0.63 (0.35 – 1.50)	3	0.92 ± 0.79 (0.32 – 2.60)
chum salmon *(Oncorhynchus keta)*	0.11 ± 0.05 (0.05 – 0.14)	3									
yellow-eye rockfish *(Sebastes ruberrimus)*	1.32 ± 0.44 (1.00 – 1.96)	4									
rockfishes *(Sebastes spp.)*	0.65 ± 0.23 (0.42 – 0.96)	4	2.43 ± 0.61 (1.80 – 3.00)	4	31.23 ± 9.59 (21.00 – 40.00)	3	0.13	1	6.40 ± 7.14 (0.36 – 14.90)	4	5.54 ± 6.82 (1.23 – 13.40)
lingcod *(Ophiodon elongatus)*	0.42	1	1.60	1	37.00	1	0.13	1	0.33	1	0.66
flounder (unidentified)	0.15	1									

rockfishes *(Sebastes spp.)*	40	4.82 ± 4.35 (0.55 - 21.00)	40	0.65 ± 0.24 (0.46 - 1.20)	40	1.46 ± 0.07 (1.40 - 1.80)	40	4.85 ± 0.21 (4.60 - 5.90)	40	9671.25 ± 1671.42 (1000.00 - 12600.00)
lingcod *(Ophiodon elongatus)*	13	1.21 ± 0.86 (0.15 - 3.15)	13	0.52 ± 0.14 (0.46 - 0.99)	13	1.45 ± 0.05 (1.40 - 1.50)	13	4.79 ± 0.12 (4.60 - 5.00)	13	10249.23 ± 1115.15 (6860.00 - 11400.00)
rex sole *(Glyptocephalus zachirus)*	3	15.53 ± 10.68 (3.20 - 21.80)	3	0.81 ± 0.43 (0.49 - 1.30)	3	2.47 ± 1.34 (1.50 - 4.00)	3	8.13 ± 4.29 (4.90 - 13.00)	3	8356.66 ± 404.61 (7900.00 - 8670.00)
rock sole *(Lepidopsetta bilineata)*	4	8.53 ± 6.91 (2.50 - 14.90)	4	0.74 ± 0.19 (0.57 - 0.99)	4	1.85 ± 0.34 (1.50 - 2.30)	4	6.18 ± 1.19 (5.00 - 7.80)	4	8985.00 ± 1442.37 (7730.00 - 10900.00)
Dover sole *(Microstomus pacificus)*	5	3.30 ± 1.29 (2.30 - 5.38)	5	0.84 ± 0.71 (0.49 - 2.10)	5	2.54 ± 2.11 (1.50 - 6.30)	5	8.42 ± 7.06 (4.90 - 21.00)	5	10478.00 ± 4468.20 (7750.00 - 18400.00)
slender sole *(Lyopsetta exilis)*	10	20.36 ± 18.07 (5.07 - 59.60)	10	2.50 ± 1.20 (0.83 - 4.80)	10	6.77 ± 3.51 (2.50 - 14.00)	10	22.70 ± 11.94 (8.30 - 48.00)	10	8410.00 ± 2059.38 (5210.00 - 12800.00)
English sole *(Parophrys vetulus)*	22	10.69 ± 11.15 (1.40 - 51.50)	22	0.68 ± 0.66 (0.46 - 3.60)	22	1.60 ± 0.31 (1.40 - 2.80)	22	5.30 ± 1.04 (4.60 - 9.50)	22	9379.54 ± 785.50 (8420.00 - 11600.00)

TABLE 9. Trace metal content data for crustaceans and fishes from Howe Sound, British Columbia, March 1971 to November 1971.

SITE	DATE	SP.	SEX	LENGTH (cm)	WEIGHT (g)	TRACE METALS (ug/g) Hg wet	Cu wet	Cu dry	Zn wet	Zn dry	Pb wet	Pb dry	Cd wet	Cd dry	Ni wet	Ni dry
ZONE 1																
Dungeness crab, Cancer magister																
B	71 03	01	F	15.4		2.70									1.70	5.10
A	71 03	01	M	16.5		1.76	6.30	36.5	29.6	170.9	1.50	8.70			2.10	11.75
A	71 03	01	M	14.8		2.01	9.90	48.7	36.1	178.0					1.10	5.40
A	71 03	01	M	16.8		3.39	16.30	87.9	41.4	222.9	9.20	49.60			1.80	9.70
A	71 03	01	M	17.5		3.29	6.90	43.5	39.8	250.8	2.90	18.70			3.60	22.60
A	71 03	01	M	16.9		1.62	5.50	27.2	43.6	215.4					0.20	1.10
A	71 03	01	M	16.0		2.00	11.30	48.5	22.6	226.9					3.30	14.30
A	71 06	01	M	18.0		1.67	4.80	22.0	43.0	195.0	0.14	0.66	0.02	0.10	0.07	0.33
A	71 06	01	F	16.1		0.79	7.60	36.0	54.0	250.0	0.07	0.34	0.02	0.10		
A	71 06	01	F	15.2		2.25	10.00	49.0	48.0	225.0	0.22	1.00	0.02	0.10	0.07	0.33
A	71 06	01	M	18.2		1.65	10.00	31.0	57.0	177.0	0.11	0.34	0.03	0.10		
A	71 06	01	M	16.4		1.55	9.50	44.0	42.0	195.0	0.11	0.66	0.02	0.10	0.07	0.33
A	71 11	01	M	18.4			6.70	37.0	35.0	190.0	0.30	2.00			0.30	2.00
A	71 11	01	M	16.5		2.24		56.0		220.0		7.00				1.00
A	71 11	01	M	18.1		2.40	4.50	22.0	43.0	210.0	0.40	2.00			0.40	2.00
A	71 11	01	M	18.1			6.80	36.0	32.0	170.0	0.06	0.20	0.02	0.10	0.40	2.00
A	71 11	01	M	20.2		2.52	8.30	38.0	41.0	190.0	0.90	4.30			0.25	1.50
A	71 11	01	M	17.7		0.83	10.00	49.0	45.0	215.0	0.40	2.00	0.02	0.10	0.40	2.00
A	71 11	01	M	17.4		1.08	6.50	33.0	44.0	210.0	1.00	5.00			0.30	1.60
A	71 11	01	M	17.1		0.96	17.00	73.0	42.0	180.0	0.65	3.50	0.02	0.10	1.00	4.00
A	71 11	01	M	18.1		1.38	7.80	42.0	33.0	180.0	0.30	2.00	0.02	0.10	0.40	2.00
A	71 11	01	M	16.7		1.71	10.00	45.0	40.0	180.0	1.00	5.00			0.40	1.50
Spiny dogfish, Squalus acanthias																
A	71 03	05	F	106.0	5443.0	1.90	0.80	1.7	2.0	4.1					1.20	2.60
A	71 03	05	M	81.0	2268.0	1.48	1.60	4.9	2.8	8.2					0.30	0.70
A	71 03	05	F	92.0	3856.0	1.82	1.00	2.2	2.0	4.9					0.50	1.20
A	71 06	05			1631.0	1.66	0.70	1.7	3.6	8.9	0.19	0.49	0.04	0.13	0.20	0.60
A	71 06	05			2095.0	1.46	0.74	1.6	4.4	9.7	0.16	0.35	0.06	0.14	0.15	0.32
A	71 11	05	M			0.75										
A	71 11	05	F			2.01										
A	71 11	05	M			0.84										
Chum salmon, Oncorhynchus keta																
A	71 06	23				0.14										
A	71 06	23				0.13										
ZONE 2																
Dungeness crab, Cancer magister																
B	71 06	01	M	17.7		0.44	9.60	38.0	55.0	210.0	0.25	1.00	0.02	0.10	0.08	0.33
B	71 06	01	M	17.9		1.95	8.30	36.0	57.0	244.0	0.08	0.33	0.02	0.10	0.08	0.33
B	71 06	01	M	18.2		2.62	9.40	43.0	61.0	280.0	0.07	0.33	0.02	0.10	0.07	0.33
B	71 11	01	M	18.1		2.56	5.90	38.0	45.0	230.0						
Chum salmon, Oncorhynchus keta																
B	71 06	23				0.05										
Rockfishes, Sebastes spp.																
B	71 03	29				0.58	0.70	2.9	7.5	32.7	3.40	14.90			3.10	13.40
D	71 03	29		42.0		0.96	0.80	3.0	5.2	21.0	2.40	9.70			0.50	2.00

TABLE 9. (Continued)

SITE	DATE	SP.	SEX	LENGTH (cm)	WEIGHT (g)	TRACE METALS (ug/g) Hg wet	Cu wet	Cu dry	Zn wet	Zn dry	Pb wet	Pb dry	Cd wet	Cd dry	Ni wet	Ni dry
ZONE 5																
Dungeness crab, Cancer magister																
C	71 06	01	M	16.4		0.52	13.00	63.0	45.0	200.0	0.07	0.33	0.04	0.18		
C	71 06	01	M	15.6		0.91	5.90	25.0	48.0	200.0	0.08	0.33	0.02	0.07	0.08	0.33
C	71 06	01	M	14.5		0.51	8.70	45.0	35.0	180.0	0.06	0.33	0.02	0.13	0.06	0.33
C	71 06	01	M	15.9		1.03	11.00	47.0	45.0	190.0	0.07	0.37	0.02	0.10	0.07	0.31
C	71 06	01	M	14.5		0.63	14.00	58.0	54.0	210.0	0.08	0.33	0.04	0.14		
C	71 11	01	M	17.1		0.48	5.20	25.0	44.0	210.0	0.60	3.00			0.40	2.00
C	71 11	01	M	16.2		1.05										
C	71 11	01	M	14.5		0.43										
C	71 11	01	F	14.9		1.12										
C	71 11	01	M	16.4		1.34										
E	71 11	01	M	15.8		1.59										
Prawn, Pandalus platyceros																
F	71 11	02				0.59										
F	71 11	02				0.32										
F	71 11	02				0.62										
Spiny dogfish, Squalus acanthias																
E	71 06	05			1543.0	0.47	0.66	2.2	3.2	11.0			0.06	0.20	0.13	0.40
E	71 11	05	M			0.96										
E	71 11	05	M			2.23										
Rockfish, Sebastes sp.																
E	71 06	29		25.7	1034.0	0.42	0.39	1.8	9.0	40.0	0.08	0.36	0.03	0.13	0.27	1.23
Lingcod, Ophiodon elongatus																
E	71 06	18		50.2	3203.0	0.42	0.35	1.6	7.8	37.0	0.07	0.33	0.03	0.13	0.14	0.66
ZONE 6																
Dungeness crab, Cancer magister																
B	71 06	01	M	14.6		0.60	17.00	75.0	59.0	260.0	0.07	0.33	0.04	0.17		
B	71 06	01	M	14.3		0.79	13.50	78.0	45.0	260.0	0.06	0.36	0.02	0.13	0.14	0.80
B	71 06	01	F	14.0		1.14	18.50	85.0	62.0	280.0	0.06	0.29	0.05	0.22	0.17	0.80
B	71 06	01	M	14.2		0.82	9.90	39.0	62.0	340.0	0.09	0.37	0.04	0.15	0.17	0.65
B	71 06	01	F	14.5		0.93	12.70	72.4	58.0	340.0	0.20	1.00	0.06	0.35	0.14	0.80
B	71 11	01	M	15.2		1.19										
ZONE 7																
Dungeness crab, Cancer magister																
C	71 11	01	F	16.1		0.59										
I	71 11	01	M	17.0		0.60	6.90	31.0	44.0	200.0						
I	71 11	01	M	18.6		1.39										
H	71 11	01	F	16.4		0.68										
Prawn, Pandalus platyceros																
C	71 11	02				0.20										

TABLE 9. (Continued)

SITE	DATE	SP.	SEX	LENGTH (cm)	WEIGHT (g)	TRACE METALS (ug/g) Hg wet	Cu wet	Cu dry	Zn wet	Zn dry	Pb wet	Pb dry	Cd wet	Cd dry	Ni wet	Ni dry
Shrimp (unidentified)																
C	71 11	37				0.25										
Spiny dogfish, Squalus acanthias																
H	71 11	05				1.40	0.30	1.0	10.0	35.0	0.55	1.50	0.02	0.10	0.20	0.60
H	71 11	05				2.04										
Yelloweye rockfish, Sebastes ruberrimus																
C	71 11	60		41.3		1.00										
C	71 11	60		59.4		1.96										
C	71 11	60		59.4		1.10										
C	71 11	60		41.3		1.21										
Flounder (unidentified)																
H	71 11	71		28.8		0.15										
ZONE B																
Dungeness crab, Cancer magister																
E	71 06	01	M	14.5		0.33	15.00	66.0	58.0	250.0	0.27	1.10	0.02	0.10	0.07	0.32
E	71 06	01	M	13.0		0.22	12.00	90.0	37.0	280.0	0.14	1.00	0.02	0.14	0.07	0.50
E	71 06	01	M	15.1		0.29	15.00	57.0	63.0	237.0	0.46	1.70	0.06	0.21	0.60	2.10
Rockfish, Sebastes sp.																
E	71 06	29	M		471.0	0.65	0.40	2.0			0.13	0.62				

SP. - species

Appendix 1. List of heavy metals analyzed and their detection limits* in tissue, sediment and effluent samples.

Metals	Abbreviation	Lowest Quantity Detectable (LQD)* Solution concentration mgl^{-1}
Aluminum	Al	0.09
Arsenic	As	0.15
Barium	Ba	0.003
Cadmium	Cd	0.015
Cobalt	Co	0.015
Chromium	Cr	0.015
Copper	Cu	0.010
Iron	Fe	0.010
Mercury	Hg	0.002
Magnesium	Mg	0.0025
Manganese	Mn	0.004
Molybdenum	Mo	0.15
Nickel	Ni	0.08
Lead	Pb	0.08
Antimony	Sb	0.08
Selenium	Se	0.15
Silicon	Si	0.20
Strontium	Sr	0.004
Titanium	Ti	0.0085
Vanadium	V	0.05
Zinc	Zn	0.02

*LQD = 10 x standard deviation